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In the Editor's Corner

Over-Specialization?

"THINGS WERE DIFFERENT in the 'good old days'!" The young-old timers will remember when the physical education teacher not only taught a varied program of physical activities and sports, coached one or more seasonal teams, but also taught health education, gave first aid, planned and conducted the summer recreational program, as well as guiding evening programs of fitness for adults. A few oldsters are still doing all this, but the sweeping changes in teacher education institutions are rapidly changing the pattern.

As we become more and more concerned about doing better in special areas, different curricula come into existence, and we now graduate specialists in recreation, others in health education and safety, and still others in physical education and coaching. And within each of these three areas there is further specialization depending on the geographical location and the demand.

On the face of it, this emphasis appears to be good. Just as in engineering, where not too long ago a man studied to be an engineer, now, after a two-year general course, he specializes in one of the many areas for two or more years before he becomes an electrical engineer, a mechanical engineer, or more than likely, one of the many technological experts in some narrow field.

The danger, however, that must be faced is that, while we may prepare people better to take care of specialized tasks, we may at the same time, be encouraging them to lose sight of the fact that they and their specialty are still just part of the overall service to society, still part of one community and one world. We may be turning out myopic, one-eyed experts who cannot see, understand or appreciate anything but their own professions.

If a recreation person, a physical education teacher, or a health education expert didn't believe that his area, his specialty was the most important in the world, he wouldn't be much of a professional. But at the same time, he must never lose sight of the fact that his contribution is only one of many, and he must also be aware of the worthwhile efforts of many other dedicated people in related as well as completely different areas.

It has frequently been said in athletic circles, particularly in certain team sports that "the best defense is a good offense." This may or may not be true, but it is a fact that many individuals often attempt to build themselves up by tearing others down. It is doubtful if we do either ourselves or our professions any good by pointing out the mistakes, the lack of achievement, and the silliness of those guiding programs in related or similar fields, while at the same time, overlooking mistakes in our own backyard

Health education, recreation, and physical education closely overlap in their contributions. It is inconceivable that a good program in any of the three areas can ignore the share each has in relation to the total welfare of the participant. The health and safety of each individual must be paramount in every human endeavor. And health education would indeed be remiss as a profession if it ignored the mental and emotional values resulting from participation in expertly-guided competitive experiences in intramural, interscholastic, and community athletic activities.

Recreation, limited to arts and crafts, or to music and drama would be minus the most vital ingredient of all, sports and athletics. And where this part of the program receives the most emphasis and attracts the largest number of participants, it usually is the result of good programs of physical education, well-planned and well-taught in the schools of the community.

The professionally-minded coach and teacher of physical education continually makes use of "teachable moments" by precept and example, by improving the environment and teaching techniques, and by including many carry-over and recreational activities in his curriculum.

While you look at these professions in relation to your own, don't overlook the fact that you may be one of those individuals, all too many in number *within a profession,* who gain satisfaction from belittling or criticizing others in the same field. The research person who fails to see the importance of good teaching, the activity leader who criticizes the coach or the research person, and the successful coach who sees nothing good in anything but the sport he is coaching, are examples. All need to broaden their vision, increase their perspective, and become truly professional people by accepting and approving the fine contributions being made in other areas, and then trying to do as well in their own.

Specialization with the purpose of better preparing our leaders is excellent, but just as we all live in "one world," so no one profession or one individual can exist in a vacuum by himself or within his own compartmentalized profession. While we may feel that others need to take this "new look," perhaps a step in the right direction would be to begin with ourselves.

C. O. Jackson

The Care and Treatment of the Skilled; Do We Practice What We Know About Motor Learning?*

"WHAT GEOGRAPHY IS TO HISTORY"

Aileene Lockhart

MOTOR LEARNING AND motor performance is an extremely broad area and is of importance to many lines of endeavor. Much of what we know along these lines has come to us from outside the field of physical education, from such diverse sources as physiology, kinesiology, education, the various branches of psychology and medicine, management, the therapies, engineering, embryology, neurology, and even from certain aspects of the philosophy of music and the arts, current studies in aviation, and experiments on human skill and tolerance which are vital to space-age human performance. Not too much has come from our own field.

Yet motor learning and motor performance is our business and progress in knowledge about this learning and performance should be of great concern to us. You will remember that the great Sir Charles Sherrington in his classic book, *Man On His Nature,* made his spokesman Fernel say "What Geography is to History, such is Anatomy to Medicine." This could be appropriately paraphrased, "What Geography is to History, such is a knowledge of Motor Learning Performance to Physical Education." Gross movement—all that can be learned about it—this describes our unique sphere of operation. Yet practically all of our methods and practices are based on studies and assumptions which we have borrowed from other fields.

How do we learn skills? How do we explain good and poor motor performance? Where did we get the information on methods of teaching that we give to future teachers of physical education? Methods of teaching and conditions for practice presuppose that something is known about methods of learning. What *do* we know about *gross* motor skill performance, and where did we get it?

We emulate championship performers. We view performance from a mechanical point of view and attempt to describe *what* occurs in terms of laws of motion and in terms of the structure of the body. We sometimes base generalizations on experimental studies which were performed on animals. Scientists have offered some excellent neuroanatomical-physiological explanations of *how* motor learning may occur in the human. A recent paper by Dr. Frances A. Hellebrandt is particularly helpful in summarizing the physiologist's concept of the process of motor learning (11).

But most of our information comes from the psychologists. In spite of some rather serious conflicts, the psychologists have produced some logical theories of learning and they have told us much about the influence of many conditions on human behavior. However, the conclusions are based on findings derived from studies of fine motor skills. Can it be assumed that these findings are applicable to both gross and fine motor learning and performance? It has been known for a long time that the development of fine and gross motor skills seems to progress differently and call for different abilities, yet we have persistently assumed close relationship in making generalizations.

"The Care and Treatment of the Skilled" implies more than might be inferred. We sometimes think of the skilled only in terms of the highly skilled. Skill may be conceived of as "a proficient gross motor habit" or "as a more or less effective way of acting with the purpose of accomplishing a goal." The words "more or less" were inserted deliberately into this definition; they imply *degree.* Just as "health" involves more than merely "good health," skill includes all levels of performance.

Certain possible topics have been omitted. The question of neuroanatomical-physiological explanations of *how* learning takes place and *why* we move have not been considered; the *role* of sports and the disputable values of skill in our culture have not been examined. Issues such as "Is there a minimum motor competence which all should develop?" have been ignored as have such philosophical considerations as "Should college physical education aim to develop high skill in a single activity or broad general skills?" This discussion is limited to a consideration of some of the practical and controllable factors which may affect the learning and performance of gross motor activities, and to some of the things that are known about the conditions for developing gross skills of the type we teach. Application of this knowledge certainly must be the unique grounds for operation of the physical educator, and one of his chief interests.

Two assumptions implicit to the discussion are: *what we teach is desirable;* and *it is worthwhile to*

*A condensation of a symposium presented at the Opening General Session of the Western Society for Physical Education of College Women at Mt. Hood, Oregon, November 5, 1959.

learn motor skills per se and to perform them well. To bring the level of learning and performance up as high as possible is part of our pursuit of excellence.

There are persons whom we continue to think of, rightly or wrongly, as less skilled than others, and there may be better or worse teaching methods which can be used with these groups. Our purpose is to examine the facts. The following discussions, therefore, are centered around considerations of the nature of motor ability, factors which influence the learning of low and high motor skill performers, retention of skills, transfer of learning, and conditions for practice.

THE NATURE OF MOTOR ABILITY

Waldean Robichaux

IN THE STUDY of motor ability, one of the basic concerns has been whether this ability is general or specific in nature. Both psychologists and physical educators have shown an interest in answers to such questions as: What are the interrelationships among various motor performances? If an individual is highly skilled in performing certain motor activities, will he display a high level of skill in performing others? Is it possible to predict from performance of one or more skills what an individual will do in performance of others?

Earlier attempts to answer these questions were made by the psychologists. Most of their investigations were designed to study the interrelationships among performances of a number of different motor skills. For the most part, fine motor skills were employed. Clear cut and definite answers to the previously mentioned questions are indicated by the findings: positive but low degrees of relationship exist among various motor performances; it is impossible to predict from performance of one or more skills what an individual will do in others. Results of studies involving fine motor skills are almost in complete agreement regarding the highly specific nature of motor ability.

Physical education is concerned with learning and performances of gross motor skills. Findings of later investigations have indicated *the relative independence of fine and gross motor skills;* these appear to be separate and distinct types of abilities. Perhaps, then, the only way we can be certain that our practices are based upon relevant knowledge is to utilize in our investigations types of gross motor skills which are similar to those we teach.

The question of whether gross motor ability is general or specific in nature is difficult to answer. The approach of physical educators differed from that of the psychologists. We started by assuming that motor ability was general and that it could be measured as a general ability. Shortly after the appearance of general motor ability tests, others were designed to measure general motor capacity and motor educability. Much of the research in learning and performance of gross motor skills has centered around the construction, validation, and use of these tests. The findings of studies in which these purported measures of general motor ability, capacity, and educability were employed are, in some instances, contradictory. The results of some investigations tend to substantiate the value of these tests, while others seriously question their value. Any conclusions regarding learning and performance of gross motor skills that are drawn from studies involving measures of general abilities must be viewed in light of the inherent strengths or weaknesses of these tests.

Another approach by physical educators to the study of gross motor ability is similar to that of the psychologists — that of determining interrelationships among various motor performances. The findings of these studies indicate relationships that are positive but, as a whole, too low to be considered of predictive value.

In general, evidences presented in studies of gross motor ability do not support a theory of general motor ability if the true sense of the meaning of the word theory is considered. In fact, it seems improbable that a true theory of general motor ability could be substantiated. It appears that learning and performance of gross motor activities can be influenced by many factors including certain psychological and less tangible ones as well as those more clearly identifiable such as strength, speed, and power. Rejection of a theory of general motor ability, however, should not lead necessarily to an automatic acceptance of a theory of specific motor abilities. Just as evidences do not clearly support a theory of general motor ability, neither do they, at the present time, conclusively support a theory of specific motor abilities. Certain relationships found in some of the studies cannot be totally ignored. Studies of high and low skilled performers indicate that subjects who display higher levels of skill in certain motor tests or activities also tend to exhibit higher levels of skill in performing others. Whatever advantages — whether called general, specific, or specific abilities — the highly skilled possess, these advantages seem to have a favorable influence on learning and performance of gross motor skills.

Perhaps, then, the only conclusion regarding the general or specific nature of gross motor ability which

can be made now is that *the problem is not completely solved*. Different approaches and careful syntheses of findings may help clarify the problem and may lead to a more meaningful interpretation of motor ability.

In summary, application of present knowledge leads to the following practical implications: (1) Students come to us unaware and unconcerned about the general or specific nature of motor ability; (2) Some of these students appear to possess certain abilities which will favorably influence and facilitate learning and performance of the motor skills we teach. For other students, the learning and performance of these skills will be more difficult; (3) Regardless of the starting level of skill or the potentials, or lack thereof, for development of certain skills, some improvement is possible; (4) What we do, and how we do it influence improvement and the development of skill; and (5) If our practices are based upon a sound knowledge of gross motor learning and performance, we are more likely to influence "for better," than "for worse."

MOTOR LEARNING OF LOW SKILLED STUDENTS

Marion R. Broer

EXPERIENCE OF MANY teachers and the few studies available concur in providing a basis for the belief that those at the lower end of the range of motor ability may have real difficulty in gaining potential values from the regular physical education program. Several studies (3, 5, 7, 24, 28, 32, 34) have indicated certain differences between the highly skilled and those who have little success in learning physical activities. A greater range of movement, an ability to apply force in sequence through the body, greater strength, wider past experience, and a liking for and satisfaction from participation in physical activity differentiate the high from the low motor ability student. Those who have difficulty in learning physical activities lack strength, particularly in the arm, shoulder girdle and abdominal regions. McCloy (19) listed muscular strength as one of the prerequisites of effective motor learning. He believed that there was a desirable minimum strength necessary for optimal learning and several studies indicate that strength of the arms is especially important.

However, these students have additional problems. They have not learned to mobilize and apply the strength that they do possess. They exhibit an inability to coordinate different parts of the body and to relax muscles antagonistic to those necessary to produce desired movement. Frequently, considerable general tension is apparent. Every learning process depends not only on the acquisition of certain tensions but also on concomitant relaxations. These students fail to use many parts of the body which contribute force and are unable to use the parts that they do employ in proper sequence. The angle at which they apply force is inefficient and they do not use large free movements.

Questioning reveals backgrounds which are incomplete in experiences that lead to ability in and understanding of skills that are basic, not only to efficient body handling in sports, but also to the activities of everyday living. They lack awareness that the basic physical principles apply to the use of the body or that several parts of the body may contribute to a single movement. They tend to exhibit a disinterested or antagonistic attitude toward physical activity. Because they have been unsuccessful, have felt inadequate or frustrated in physical activity in general, they have built up a dislike of activity and a self-consciousness about all their body movements. As a result many are unable to gain satisfaction from the normal physical education program. It may be that in some cases required physical education causes further frustrations and feelings of inadequacy which may lead to personality problems. Students who learn physical activities slowly are likely to become discouraged when in a class with those who learn more readily; through repeated failures, psychological barriers are built up and strengthened.

Psychologists have demonstrated that an individualized and carefully developed program of instruction can effect striking improvement in reading ability. While perhaps not as striking, studies dealing with specialized courses for college women of low motor skill also are in agreement that these students can gain greater value from physical education after specialized instruction.

It was found in one study (2) that students who had had a special course which involved general relaxation and the basic skills (standing, walking, running, jumping and landing, falling, pushing, pulling, lifting, throwing and catching, and striking) with an emphasis on understanding reached a higher level of skill and knowledge in subsequent beginning classes than those of equal motor ability and intelligence who went directly into the regular activity program. Their improved attitude, which may very well have been tied-up with their reported added self-confidence, seemed to be the most important factor in their greater success. It is impossible to state whether the increase in skill was responsible for the improved attitude or the improved attitude for the increase in skill. Other studies have indicated also

that the student can profit from teaching specifically designed in content and methods (5, 7, 17, 28).

Segregation of low motor students does relieve, to some extent, self-consciousness about movement, but *their problems can not be solved simply by segregating them and teaching them the same material by the same procedure* as used in other classes. They need to develop ability in the fundamental motor patterns and skills and to understand principles basic to their efficient execution. The special courses reported have concentrated effort on this type of content.

Content, however, is only one part of teaching. The methods and techniques of presenting material and the atmosphere of the class are even more important for these students than for the average. While all teaching should aim to provide experiences which develop thoughtful purposes, not merely imitative motor responses, this is more important with this group since they tend to lack the kinesthetic perception necessary for successful imitation. Highly frustrating experiences can result from too much emphasis upon this method. It is extremely important that relationships between movement patterns be pointed out, and application of all that is taught to various sports and to everyday tasks must be made.

Frustration must be avoided. If excessive tension is to be controlled, frustration must be replaced by success so that self-confidence in movement can be restored. Gates (9) stated that a teacher will do much for the learner if he praises more than he reproves, gives positive directions rather than negative commands, and places emphasis on successes rather than failures. With students who have psychological blocks against activity, it becomes increasingly important to follow these principles.

While good teaching on any level involves student recognition of progress, evaluation is an even more important factor in the curriculum for the poorly skilled group. Methods of practice should, whenever possible, include evaluation obvious to the student. Success and failure are relative to an individual's own goals. There is evidence to indicate that psychologically, success depends to a considerable degree on the individual's goals rather than on a set level of performance. The instructor must guide each individual in the setting of goals consistent with his power of attainment. Therefore, standards of achievement must be individual rather than general.

In summary, the findings of studies dealing with students at the low end of the motor ability scale seem to suggest that their backgrounds are limited to the point where they do not profit greatly from much of the instruction in the usual activity classes; that they need help in the development of certain prerequisites to motor ability, such as strength and relaxation, but they also need to gain a vocabulary of motor patterns upon which they can build more complex skills; that the methods of instruction as well as curriculum should be adjusted to the particular problems of these students; evaluation obvious to the student needs to be built into practice; and each student must be helped to set his goals within his capacity to accomplish with real effort.

MOTOR LEARNING OF HIGH SKILLED STUDENTS

Joan Johnson

UNFORTUNATELY, WE DO not have many studies on highly skilled people. This apparent lack of interest in high levels of skill is evidenced in some of the present programs of physical education which attempt to bring the poorly skilled up to the level of the average, teach to the average, and ignore those whose skills are above average. If we believe in helping individuals to attain their potential, we are failing the well-skilled group miserably. Without effective guidance and encouragement, our more talented students will not be challenged to improve and will probably never even approach the level of performance of which they are capable.

One of the ways in which a high level of performance can be attained is through the use of efficient and effective methods of performance, commonly called "good form." It should be pointed out that good form is subject to change as we further our understanding of scientific principles, experiment with new methods and techniques (especially those utilized by the latest champion), improve equipment, and take advantage of changes in game rules. According to Ragsdale, "motor learning seems to take place by a progressive variation of response; there is a gradual approach to an ideal form of movement as a limit. Learning, however, never reaches the point where this ideal form is regularly (or even often) used, not even by the expert or professional" (26). Thus, a fixation of response is not attained even by the highly skilled individual; "the search for better methods *cannot stop* even when the ideal has been approached" (26). If this search stops, it marks the end of learning, or in other words, the performer is in a rut.

In addition, there appears to be a methodological limit to performance if good form is not followed. The student who fails to utilize an adequate backswing in the underhand volleyball serve will reach a limit in terms of the force with which he can hit the ball. Any attempt to increase either the distance

of the serve or the speed of its flight will soon demand a change of method.

As pointed out previously, the search for better methods continues even at high levels of skill. To a certain extent, this may account for the observation that champion performers often seem to differ from the accepted concept of good form. At higher levels of skill, performers tend to adopt a style of their own that may embody idiosyncrasies of a highly individulistic nature. Furthermore, highly skilled performers differ from one another; thus, there is only an approach to uniformity in the form of a movement. Consequently, some caution should be exercised before the latest style of the champion is adopted and taught to all, since too often attention is diverted from the basic nature of the highly skilled movements to the superficial and unimportant aspects of the champion's style.

Part of our knowledge regarding the elements of good form has come from studies dealing with speed and accuracy and from studies of various kinds of movements. Much of the confusion which arises in discussions of speed and accuracy stems from failure to define terms clearly. Concerning speed, one reviewer asks:

> "Speed of what? Speed of the body? Of one of the body limbs? Of an implement moved by the body? Or, the speed of a projectile, moved by the speed of an implement, swung by the speed of a body limb which itself was moved with the help of body movement?"

Accuracy, too, is confusing, since it may be recorded as the number of hits on a target, refer to the impact between the ball and racket, or the accuracy of the movement itself with reference to the form. We need to understand which speed and which accuracy are involved.

In spite of a substantial and continually growing body of evidence to the contrary, many instructors still say to beginners: "Do it slowly; get it right; develop accuracy first; get the pitch over the plate, or get the serve in the court; speed will come later!" And perhaps it will, but much later, and *only after the student has re-learned the entire skill.* Here emphasis is being placed on the accuracy of the projectile, not on the accuracy or form of the movement. "Movement performed at slow speed is radically different from fast movement, so far as the type of muscular contraction and therefore the type of nerve impulse is concerned" (26). Slow movements may attain a good finished product in terms of accuracy on the target, but they do not follow the path of skilled movements; they are not consistent with good form; and they utimately do not bring the best results for most people.

The research literature points out that many skills in physical education call for ballistic type movements which depend upon an accumulation of momentum or speed during the movement. It has been shown that when stress is placed on speed during the early learning of a ballistic movement, the good form which was developed transferred readily when later emphasis was placed on hitting the target. However, when accuracy was stressed first, it deteriorated when later emphasis was placed on increasing the speed of the movement. Where both speed and accuracy are essential to final performance, both factors should be emphasized during early learning.

Some early research indicated that speed and accuracy were inversely related; that is, as speed increased, accuracy decreased. However, in a recent study (14) dealing with the tennis serve, no relationship between speed and accuracy was found; that is, they were independent factors. At high levels of skill, when greater velocities were imparted to the projectile, accuracy in hitting the target was not adversely affected. We need to practice what we know: Stress should be placed on good form, and skills should be learned at the speed at which they will be performed; accuracy in hitting the target will come later.

Part of the difficulty in developing good form appears to be related to the traditional method of teaching by demonstration. Because of our concern for getting the beginner started on the right foot, we usually demonstrate the skill in slow motion, stressing carefully the many details or parts of the action.

Unfortunately, our concern for the students' welfare has led us to commit two errors. First, the beginner needs to see the total pattern in its finished form, but he will not imitate the demonstration in detail. Beginners cannot grasp all the fine points of a skilled movement, thus our efforts in calling attention to parts and details at lower levels of skill are only confusing. As skill increases, however, verbal explanation and attention to detail become more meaningful, thus more effective, and are essential to further improvement. The combination of verbal instruction and demonstration proves to be more valuable than the use of either method alone, although demonstrations lose value rapidly as soon as a small amount of improvement occurs.

Our second error involves the slow-motion demonstration of a highly skilled movement. The demonstrator must change the movement in order to slow it down; thus the student sees action which has been falsified. In most activities, slow demonstrations can best be given by means of slow motion movies, and this device is probably most useful at high levels of skill.

In spite of our continuing need for more research in practical teaching situations, we do know many things about the "Care and Treatment of the Skilled." One of the most important involves the role of motivation. "Motivation can be maintained only when the goal of activity is known and progress toward it can be estimated meaningfully. Measurement devices appropriate to the activiey and to the stage of skill must be used" (27). Knowledge of results has been found to be essential to learning and an effective means of improving performance. In our new age of automation, perhaps a more appropriate term is feedback which the experts define as a method of controlling a system by reinserting into it the results of past performance. Learners, too, need to know the results of their past performances.

Of the many forms of knowledge of results that have been studied, the most successful forms utilized ego - involvement, self - motivation and individual improvement. We need to help students to estimate their progress meaningfully and accurately. Progress in swimming, bowling, and archery is relatively evident to the learner, but we need to develop some simple, informal, objective devices appropriate for use where progress is not so obvious. These devices need not be constructed within the boundary lines of the court or within the rules of the game, since they are intended only as a simple means of providing accurate feedback for learners.

We need to adjust our individual teaching techniques in order to use these evaluative devices effectively. The daily records of the highly skilled person will not show as much evidence of progress as will the records of the poorly skilled person; at higher levels of skill progress is not so rapid and fluctuations and plateaus may be discouraging. However, highly skilled performers appear to be interested in competitive comparisons — each one wants to beat the best score. Poorly skilled individuals tend to deteriorate under the pressure of competition with others, but are very much interested in their own daily progress. We know that accurate and continuous evaluation of personal progress at all levels of skill facilitates learning tremendously. We need to put our knowledge to work in our daily teaching.

RETENTION AND SOME CONDITIONS OF LEARNING

Bonnie Purdy

ONE IMPORTANT ASSUMPTION of our curricular organization is that students do retain skills. We actually have very little evidence, however, about retention of gross motor skills and must of necessity infer generalizations from findings on retention of verbal materials and fine motor skills.

The few experiments on gross motor skills, as a whole, show an astonishingly high retention of these skills, even after long periods of time. After one year, a group of college women retained an average of seventy-three per cent of the highest, not the average but the highest, skill level reached in a series of novel gross motor skills. This was true for both the high skilled and the low skilled groups. In addition, twenty-two per cent, or nearly one-fourth, displayed reminiscence; that is, they made higher or better scores on one of four skills than they ever had before.

These facts have some interesting implications for teaching. Perhaps we spend too much time in reviewing fundamentals in intermediate and advanced classes. We may be losing interest as well as valuable teaching time. Perhaps one of the reasons students do not attain higher skill levels is that they do not have time to practice advanced skills because they have reviewed fundamental skills for half the semester.

How can we help students retain the skills we teach? Factors which make retention more likely are: meaningfulness, overlearning, distributed practice, intent to retain, and "affective tone."

If we expect our students to retain the skills we teach, those skills must be meaningful to the student. What is the purpose of learning a drop shot in badminton? When is it used and why? We probably tell our students this, but do we *teach* it, accepting the maxim that there is no teaching without learning.

Overlearning enhances retention. And this may be one of the reasons that we retain so well skills learned as children, such as riding a bicycle and swimming. These are overlearned, not one hundred per cent or two hundred per cent but thousands of per cents. As teachers, we cannot insure this kind of overlearning. But we can attempt to have our students overlearn one hundred per cent and two hundred per cent. Do we have our students practice a skill until they get it "right" once and then go on to something else, or do we have them practice until the right act becomes the habitual one which will be retained for a longer period of time?

Along with this approach goes the concept of distributed practice as opposed to learning or overlearning all at once. After students have learned a skill, do we let them repeat it a number of times, or do we assume that, since they have performed it correctly once they will get practice in using the skill in a game situation? Shouldn't we see to it that they *do* practice the desired skill in a game situation, even to the point of establishing artificial rules? For example,

"In this game of volleyball, everyone must serve overhand."

Intent to retain or to use again the skills we teach helps a student to remember them. In the study where the students retained seventy-three per cent of their highest skill level, they did not know they would use the skills again when they originally learned them. It seems logical to assume that their retention would have been still better had they known this. In both our major and our service classes, do our students really understand the carry-over values of the activities which we talk about but perhaps don't teach for?

Affectively toned activities seem to be better retained. In other words, students remember activities they like better than those they dislike. We know this and we try to make students like our classes. Or do we? Do we, because *we* like the activity, blithely say, "Everyone should like tennis!" and go on teaching as if all our students like tennis or will as soon as they become more skilled?

Retroactive inhibition also affects retention. Retroactive inhibition is the interference of other activities or other learning with recall or retention. The more similar two activities are, the more interference there is. Because of the structure of our programs, it is well-nigh impossible not to teach similar activities in close proximity. So, should we accept the fact that we will have interference and let it go at that? The answer is no, because an activity which has a well-knit organization of its own has greater resistance to retroactive inhibition than does one which is a series of parts loosely held together. If our students see the parts in relation to the whole, if they see the activity as a totality, there is more possibility of retention, even when they proceed into another very similar activity.

The way in which an activity is learned affects retention, which brings us to whole-part learning. There are differences of opinion, but according to one study, the whole method is the process of learning all the skills involved in the activity at one time. Learning an entire swimming stroke at once, or playing a game of badminton or volleyball as an entirety from the beginning are examples of the whole method.

The same study defines the part method as the process of learning parts of an activity separately until all parts are learned and then performing the parts as a unified whole. Learning the kick, the arm stroke, the breathing separately, and finally performing the crawl as a whole is an example of the part method.

There are various combinations of these methods, such as whole-part-whole, progressive-part, and so on.

In the studies made, the results are occasionally confusing, partly because the terms used have various meanings and partly because different experimental conditions have obtained. However, several generalizations are fairly clear: (1) Individual-type activities in which the student acts as a whole by himself, such as swimming, may be best learned by the whole method; (2) In dual-type activities, in which the player has one opponent, or a partner and two opponents, such as badminton and tennis, either the part or the whole method seems as effective in learning, although there is some indication that it is best to begin with individual skills (the part method) and then combine the individual skills into the total game (the whole method) as quickly as possible; (3) Team-type activities in which the whole is very complex and in which the student must learn individual skills, skills in relation to teammates and opponents, and complex rules, seem to be better broken into parts which are learned first and then put together in the whole. Games such as basketball, softball, and volleyball seem to be best learned by beginning with the part method and progressing to the whole as soon as the parts are learned.

Another way of stating these ideas is that activities which are closely knit, such as swimming, are best learned by the whole method. Activities which are loosely knit, such as softball, are best learned by the part method. These loosely knit activities might really be described as a series of wholes combined into one big whole.

Mental practice is another factor which influences motor learning and performance. When students observe classes, we assume they will learn something from watching others and from the mental processes which go on while they are watching. In the few studies which have been done at the college level, mental practice or thinking through or imagining the physical act, has been of benefit in learning motor skills, but it is not as effective as physical practice. There are two practical applications of this knowledge: 1) Observers should be given *directed* mental practice, for the word directed seems to be the key to improvement; and (2) Perhaps a combination of mental and physical practice would be more effective than just physical practice alone.

FURTHER CONDITIONS FOR PRACTICE AND SOME ADMINISTRATIVE CONSIDERATIONS

Ann Stitt

TWO OTHER RELATED factors which should be discussed are: the transfer of learning in its positive and negative aspects and massed practice in comparison to distributed practice.

Transfer of learning may be defined as the transfer of one skill or knowledge to another situation. Not too long ago, the belief was held that the process of learning in itself was beneficial and that increased mental practice of any difficult type would facilitate future learning. It is now thought, however, that rote learning with its memorization and mimicry does not aid in transferring knowledge or ability to other experiences. As a result, teaching methodology has been considerably changed. In the learning of gross motor skills it is now assumed that transfer tends to be high-

ly specific; the more nearly alike the stimuli and responses are in two different situations, the more positive may be the transfer.

It has been suggested that transfer should be taught deliberately, for the assumption cannot be made that transfer will occur automatically. Transfer is more likely to result when students understand and are able to apply underlying principles and methods of work in a number of different experiences. Research studies in our own field indicate that:

(1) Partial or superficial learning results in the possibility of more interference by other learning than does mastery; (2) In learning activities involving similar elements and patterns, one should be learned thoroughly before proceeding to the other; therefore, similar activities such as tennis and badminton should not be scheduled alternately; and (3) Many variables may lead to negative transfer; if an activity involves many details and different techniques, interference with learning is more likely to result.

The distribution of, and the time allowed for practice of motor skills are other phases of the physical education program which must be considered. The length of practice periods and the amount of time between practice sessions affect learning and performance. Practice sessions should be short when the skill is complex, when motivation is low or when amount of effort required is high. Reactive inhibition is less likely to occur as a result of fatigue. In addition, maturation and mental rehearsal may occur between periods of practice. These factors seem to indicate that *distributed practice sessions are particularly important at the beginning levels of learning skills.*

At high levels of skill, however, massed practice may be more beneficial. Massed practice is also favorable when the task or skill is highly meaningful, when insightful learning is possible, when material has been previously learned to a high degree of proficiency, or when long warm-up periods appear to be necessary.

In applying what we know about motor learning and performance to the physical education program, the college administrator must consider both the general activities program and the professional preparation program.

In the general activities or service program, a wide variety of courses should be offered to insure that the needs and interests of all students are served. Graded levels of skill (beginning, intermediate, and advanced classes) make possible the teaching of progressive skills and eliminate the necessity of presenting too many techniques or details before all students have learned the basic fundamentals.

In the professional preparation program, other factors are involved. To facilitate application of theory and methods to actual teaching situations, transfer should be taught for directly in as many related situations as possible. An understanding of the relationships of kinesiology, physiology, methods, principles, and psychology to the teaching situation makes these subjects more meaningful to the student and will aid him in applying knowledges to teaching. Laboratory experiences should resemble theoretical situations as nearly as possible, with similarities and application of principles being pointed out as they refer to the new experience. The learning of many specific activities will be more effective when similar skills are taught thoroughly and one at a time rather than when they are spaced on alternate days or on consecutive periods of one day.

Another administrative aspect involves the scheduling of classes, including such factors as length of class periods, class size, facilities and equipment, and instructors' abilities and preferences.

Differences in skill should be considered when determining the length of class periods. At the beginning and intermediate levels, daily practice, or more realistic to the college situation, two or three practice periods a week seem to be more beneficial than two or more consecutive hours of practice one day a week. At the advanced level of skill, students may benefit from one massed practice period of two or two and one-half hours duration once a week.

The size of the class should be determined by the nature of the activity and the facilities available. Ideally, a class should consist of only the number of players required for the game or activity in relation to each court, field, or facility. This makes more likely the occurrence of similar elements and realistic experiences then will a modified game or a makeshift situation. The size of the class determines, in part, the effectiveness of the instructor. Classes which are too large make individual instruction less feasible, evaluation more difficult, and sufficient practice less likely.

Facilities and equipment should be the same for each practice period if similar elements are to be held constant and maximum learning is to occur. The best possible equipment should be provided at all levels of learning.

Instructors should be scheduled to teach activities which they themselves thoroughly enjoy and for which they have a thorough appreciation and knowledge in terms of purposes, objectives, and skill intricacies.

Many departments accept responsibility for the campus recreational program in respect to administering equipment and facilities, in providing staff supervision and time, and direct financial support. From findings about the factors involved in motor learning and performance, the following reasons support the

acceptance of this responsibility by physical education departments:

(1) Physcal educators have an opportunity to point out and put in practice principles and objectives in a realistic situation; (2) Students have opportunities to practice skills at times other than class periods; and (3) Through the recreation program, students gain increased motivation and meaning which contribute to their learning.

Many other suggestions and inferences could be made from that which is known about motor learning and motor performance. Care must be taken, however, both in interpreting available findings and in making assumptions about the numerous things that are not known when formulating, administering, and conducting a program which may best exemplify the ideals, purposes, and objectives toward which we strive.

IMPLICATIONS AND JUSTIFICATION

Leona Holbrook

ALL LIVING THINGS use movement as an instrument of expression and impression. Robinson in his book, *Mind in the Making,* accounts for the development of species in the special sensitivity and response of some particular specimens to environmental stimuli. Their responses brought them to new conditions and forced new adaptations upon them.

A good share of the many sensory stimuli received by any living organism are met because that organism has the capacity to move about, to alter his environment by moving, and thus to create new horizons for himself, or to make occasion for many new situations which teach him important lessons.

Coordinated movement in physical performance is the biological basis for man's present day excellence. Secondary skills of accomplishment in the handling of gross objects, and the construction and decoration of useful items for everyday living have directed the race of man historically toward the realization of his great potentiality.

The biological basis of human existence is present with each representative of the race. John Dewey years ago pointed out that it is the whole child we educate, not just a group of memory centers. The place an individual fills in society is judged in terms of his total expression. Culture must be judged by total expression, and education must be for this total expression. Plato argued in his *Republic* for and John Locke urged the recognition of motor activities, motor expression, and motor skill as a way of living. Herbert Spencer clamored for the development of physical education and Dewey, Bode, Horn, Jacks, and

The better the motor experience in skill and attendant social cultural comcomitants, then the better the contribution of education. We are rightly concerned with how to better teach skills and how to teach better skills.

An honest and continuing search for better product methods is the keynote of progress in all business institutions. *Fortune Magazine* and *Nation's Business* feature men and corporations who succeed because of analysis and self-energized progress. As with them, product is our main concern. We have little to concern ourselves with in procurement, publicity, or export in comparison with the product. We have the teacher and the learner, and while we have three or four objectives other than neuro-muscular skill, the assurance of attainment of the other objectives is quite closely bound with the attainment of neuro-muscular skill.

The education of an individual is neither a compilation of course credits nor a matter of "getting." It is a matter of the individual's "becoming." Rugg says:

"Human experience is unified and continuous; there are no separate instincts; ends and means, character and conduct, motive and act, will and deed—are all continuous; hence all dualistic interpolations of experience are fallacious."

The many things that an individual becomes when he gains control and mastery in an activity will be difficult to analyze. All of the factors entering into a skill may not be easily determined. If it is increased acuteness in peripheral vision, speed in performance, rapidity in response, control in timing, adaptability to change of pace, judgment of space, refined coordination, has he not become more of a person? Who can say that these factors, or others, will not be employed in future activities? It may be certain that these and other increased factorial abilities which have become his will enrich various aspects of his continuing life.

Dr. Arthur W. Combs of the University of Florida has recently expressed his views in most optimistic terms on "learning as a problem of personal meaning." He says:

"Education as we have known it has done pretty well in two of its phases. It has been quite successful in getting information and making information available. . . . Our greatest failures are those connected with the problem of helping people to behave differently as a result of the information we have provided them." . . . (Combs in *Learning More About Learning.*)

Dr. Combs explains that facts and figures are comprehended, learned, and retained better when there is personal meaning attached to the learning. Psychological distance deters learning. What are the psychological and personal propinquities we may develop to make motor skills a matter of "to have and to hold." He lists number one as the first of seven factors upon which an individual's perception is based as "the nature of the physical organism he possesses." How can we better prepare the physical organism to participate in a physical act by which he may learn

"motor skills" and "mental notes?" This is a reversal on us in a way, when we have felt that an individual had to have "readiness of a mental type.

In the teaching and learning of motor skills there are two groups involved: 1. The learners: Of the learner L. P. Jacks says:

"Man is a *skill*-hungry animal, hungry for skill in his body, hungry for skill in his mind, and never satisfied until that skill-hunger is appeased. The happiness that man's nature demands is impossible until the creative part of him is awakened, until his skill-hunger is satisfied. No amount of ready-made pleasures purchased on the market, no intensity of external excitement, will ever compensate for the starvation of his essential nature as a skill-hungry being." (Quoted in March 1946 *Reader's Digest.*)

2. And there are the teachers. Of them we ask, "Do We Practice What We Know About Motor Learning?"

To my friends in physical education I would wish to quote from Isaiah: "Strengthen ye the weak hands, and confirm the feeble knees. Say to them that are of fearful heart be strong, fear not."

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The Administrator

Ray O. Duncan

ADMINISTRATION ENCOMPASSES MANY duties and responsibilities involving budget, finance policies, aims, objectives, curriculum, schedules, bulletins, personnel, student relations, faculty relations, public relations, speaking engagements, facilities, equipment, management, organization, and perhaps many others.

The most important aspect of administration is dealing with people. Budgets and finance, schedules and many of the other duties are somewhat mechanical and may be delegated to an assistant or secretary. The human element, however, cannot be ignored and the success of an administrator will not exceed his ability to deal successfully with people.

Suggestions for administrators.

1. *Be friendly and considerate.* All staff personnel are individuals with feelings, desires, aspirations, hopes, beliefs, wants, needs, and dreams. Treat everyone as an important person and be friendly in your relations with every member of the staff. It is important to be considerate of the feelings of people at all times and do everything possible to help staff members develop a feeling of satisfaction. If you can make people feel good about themselves, you will never need be concerned about what they think of you.

2. *Be alert to opinions of others.* Encourage staff members to develop ideas and express opinions. Never say, "it won't work," to an idea. There will be many times when an administrator must say "No" to a request, but never say "No" to an idea. To do so, even though the expressed idea is bad, will tend to stifle free expression and cause a staff member to be reluctant to speak out at will. It is highly desirable to develop imagination, concepts, and ideas within a staff. A quick "No", or any other manifestation of lack of interest may deter such development. If an idea expressed by a staff member sounds bad say, "you may have something there, let's think about it for awhile," or, "not a bad idea, work out the details." If the idea is not sound or feasible, the person who expressed it will probably come around to the realization and withdraw or alter it. Such action on his part leaves him uninhibited for free expression of future ideas — some of which may be real good.

3. *Be careful what you say and how you say it.* A word spoken cannot be recalled. You may say something else to change a previous statement, but the original remarks have made some impression, and if unfavorable it will not be entirely erased by subsequent expressions.

Most people talk too much. Did you ever hear a speech, for example, which was too short? On the contrary, can you recall ever hearing a speech you considered too long? If you fail to say something which should have been said, usually you can say it later. Of course, there are situations which demand quick action and delay in speaking is not possible. As a general rule, however, it is better to say "too little" than "too much." This is particularly true in regard to critical expression.

The Bible contains some excellent advice in this regard, "Be swift to hear, slow to speak, slow to wrath." Jas. 1:19.

4. *Be bold enough to dream.* An administrator must develop ideas and be alert to improvement if he expects the staff to do likewise. However, the dreams of the administrator must somehow be transmitted to staff personnel by some method of "osmosis," or thought transmittal, of through informal discussions with individuals. Ideas of the administrator must be judiciously handled in order to be effective. If an administrator has the power and authority to put his ideas into effect arbitrarily, he may be tempted to exercise this authority unwisely. In such a situation, the staff may accept the idea because the boss has so decreed and dislike it for that reason even though the idea is good.

5. *Be honest and fair.* It is very important to be honest in relations with staff personnel. If there is something which an administrator cannot divulge to a staff member, it is better to state that fact rather han to give an erroneous answer. "No comment" or "No answer" is always better than an untrue or partially true statement. Fair treatment of staff personnel means to treat them all the same professionally. Personal and professional matters should be separate. All consideration which is due to a person for his professional contribution must be given regardless of the personal feelings of the administrator.

Advances in salary and rank must be based upon some system which is fair to all personnel. In the absence of regulations which provide for automatic advancements with years of service, the administrator should base his recommendations upon merit. He should be fair in his evaluation and be honest enough to accept his responsibility and stand by his decisions.

6. *Be wise enough to weigh and decide.* An administrator needs the wisdom of Solomon, the patience of Job, and the strength of Samson. There are many decisions he alone must make after due

consideration of all available facts. Once a decision is made, it becomes department policy deserving of the support of all personnel.

7. *Be able to tolerate human failings and inefficiency.* A successful administrator seeks to secure the best results obtainable from the staff. In order to accomplish this he must have a "high frustration level" and not be easily discouraged by human failings. Every staff member has strength, weaknesses, abilities, and limitations. It is logical to assume that each will contribute his best efforts. The administrator should not expect perfect performance on all occasions from staff members and be surprised and disappointed with less than perfection.

Perfect solutions are seldom obtainable. The administrator might look upon the staff as a coach does his team, and like a successful coach work with available material for the development of individual skill and team work.

8. *Be able to acquire humility.* No one admires a person who considers himself superior. An administrator has certain duties, rank, responsibilities and recognition due to his position. He is still a person no "better nor worse" than any other staff member, and his ultimate success or failure will depend upon how well he does as a "person" in an administrative position.

9. *Plan well for staff meetings.* A staff meeting can be a worthwhile professional experience for all concerned or a horrible bore. A certain number of staff meetings seem unavoidable, for example, at the opening and near the close of the school year. However, it is unwise to consider a staff meeting as just a formality or a requirement. If there is nothing worthwhile to do at a staff meeting, do not schedule the meeting.

In general, a meeting at the opening of school can be a real morale builder for the staff with introductions of new members, plans, hopes, and aspirations woven into a delightful pattern which unfolds as a team approach to an interesting season. A meeting near the close of the school year can serve as a review of accomplishments, a look to the summer, and bring down the curtain upon a successful year. At least one staff meeting during the year is usually necessary for reports of committees and discussions pertaining to various aspects of school or department business.

There is an old saying in our profession to "kill a game before it becomes dead." It is certainly desirable to adjourn a staff meeting before it becomes "dead." The agenda should be prepared for a reasonable length of time — 1½ hours, 2 hours at the most. If things bog down or more discussion develops than anticipated, adjourn at the appropriate time even though some items on the agenda remain for the next meeting.

A Good Sportsman

Is Courteous

On the field he does not jeer at errors; he does not cheer at the opponent's penalty; he treats them as guests, not enemies.

In school he is considerate of the faculty, of the fellow students, and of visitors.

In life he is respectful to elders and superiors; he treats the other fellow as he would be treated

Is Modest

On the field he works for the good of the team rather than for individual honor; he will even sacrifice his own prestige for his team; he is a gracious winner.

In school he does not become conceited over his success, neither does he feel himself superior to his classmates.

In life he does not "blow" about what he is going to do; he does not boast about what he has done.

Is Generous

On the field he applauds a good play of his opponents; he gives the other fellow the benefit of the doubt.

In school he does not "knock" other schools or individuals; he appreciates another's merit.

In life he does not ridicule the man who is "down," but encourages him. He is not afraid to think for himself and to voice his opinions straight, forwardly, and clearly.

Is Game

On the field he plays hard; he fights though he may be already defeated; he accepts adverse decisions; he is a good loser.

In school he does his work, he keeps on working in the face of almost certain failure. He has "the vim to think straight, the pluck to act straight."

In life he does his part however hard it may be; he accepts reverses with a smile and tries again.

Is Obedient

On the field he observes the rules of the game.

In school he observes all of the regulations.

In life he respects the civic laws and the demands of the community.

Is Fair

On the field he competes in a clean, hard-fought but friendly way; he helps an injured opponent; he has no alibis.

In school he does not waste his time nor that of the faculty, he does not copy his classmates' work; he does not receive aid from any source on his examinations.

In life he sees impartially both sides of a question; he uses no underhanded methods; he is not influenced by money; he is not partial in administering justice.

MANUAL HIGH SCHOOL,
Indianapolis, Indiana

School Laundries Are Good Business

O. E. Metcalf

THE "COMMON TOWEL" or the "bring your own" went out with the Model "T" Ford and today a school laundry should be a feature of all school planning, just as essential as the cafeteria or lunch room.

Every student should have a clean towel after each shower. All team members should have a clean pair of sox, supporter and T-shirt at least every other day and if possible every day. These services can be provided for a nominal fee if the school owns its own laundry equipment.

At the Community High School, Crystal Lake, Illinois, each student pays $3.50 per year for a clean towel after each activity period, and for the use of a combination padlock for his locker.

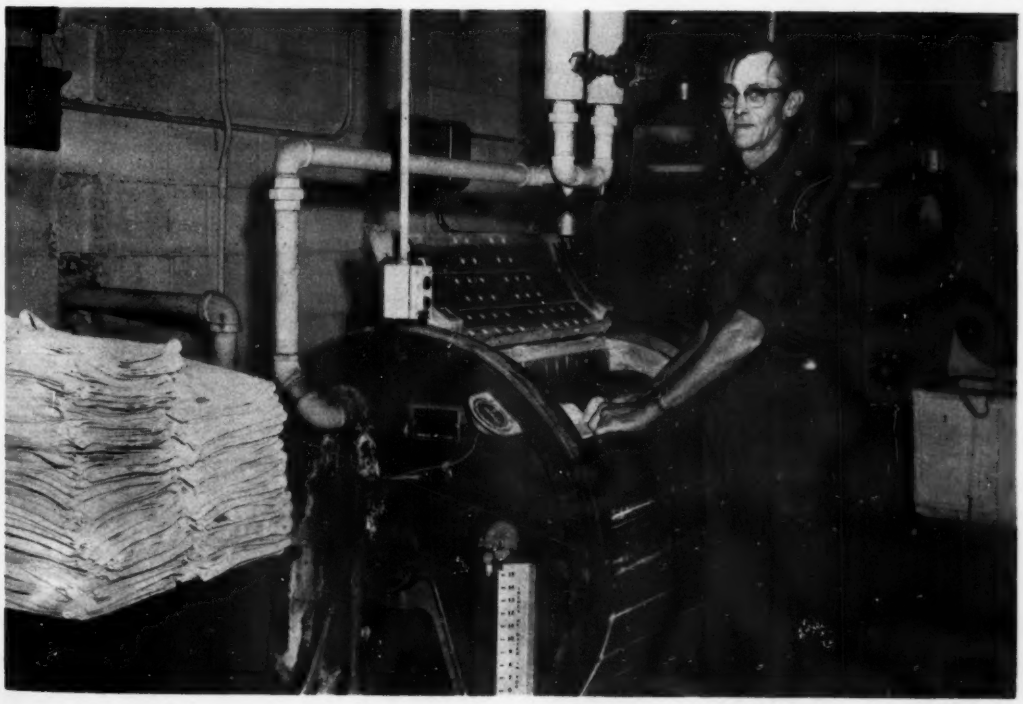
All boys on the football and cross country teams pay a $3.00 fee, for which they receive a new T-shirt, supporter and sox; these are exchanged daily for clean equipment. Boys on basketball and wrestling squads pay a $1.00 fee for the service and the same charge is made each boy out for spring sports.

A white ribbed towel — 20"x40" — at $8.95 a dozen gives the best service. Plain towels are better than a fancy towel with the school colors and name on them, as the plain towel does not make a good souvenir. One towel per shower is adequate for each student. With no towels allowed in the student lockers, a small towel inventory will service a school of six hundred students.

Using the "honor system," towels are placed at the towel windows so each student may take one as he leaves the shower. Dirty towels are deposited in towel baskets or conveniently placed receptacles. Push-ups, running laps, or suspension from class, are used as penalty for violation of the "one towel rule," or failure to pick up towel after its use. Once the students are conditioned to the above procedure, very little difficulty is encountered.

A considerable saving is made each year by laundering practice and game equipment in the school laundry. All practice equipment, as well as most game equipment, is washed in our laundry. Our football teams wear white game pants and white jerseys at home and orange jerseys away, which are washed after each game.

Regular commercial laundry equipment is best suited for this type of work and should be purchased for schools for over four hundred students. For



schools of less than four hundred, the regular home automatic washer and dryer may prove satisfactory.

Here is our budget for Crystal Lake Community High School (1200 enrollment).

1) Cost of towel service when done by commercial laundry:

1200 towels @ 3½c each— per day	$42.00	
180 school days at $42.00		$7,560.00

2) School operated laundry:

50 lb. washer	$1,375.00	
50 lb. tumbler	385.00	
25 lb. extractor	890.00	
Installation (Approximately)	250.00	
100 doz. towels @ $8.95	895.00	
Total capital outlay		$3,795.00

3) Yearly operational costs:

Detergents, bleaches, etc.	$ 266.00	
Salary one operator—38 wks	2,700.00	
50 doz. towels	447.50	
Capital Investment— amortized 10 yrs.	379.50	
20 doz. new locks @ $1.10	264.00	
Total cost		$4,057.00

4) Receipts: 1200 towel fees @ $3.50 ..... $4,200.00

Total Yearly Operational Cost 4,057.00

Sinking fund—Balance ..... $ 143.00

From the above figures it is evident the school operated laundry will pay for installation and operational costs in the first year.

Everyone talks about health; let's do something about improving practices relative to health. Why not investigate such a towel and laundry service as just described?

Just For Today

Just for today I will try to live through this day only and not tackle my whole life problem at once. I can do something for twelve hours that would appall me if I felt that I had to keep it up for a lifetime.

Just for today I will be happy. This assumes to be true what Abraham Lincoln said, that "most folks are as happy as they make up their minds to be."

Just for today I will adjust myself to what is, and not try to adjust everything to my own desires. I will take my "luck" as it comes, and fit myself to it.

Just for today I will try to strengthen my mind. I will study. I will learn something that requires effort, thought and concentration.

Just for today I will exercise my soul in three ways. I will do somebody a good turn, and not get found out; if anybody knows of it, it will not count. I will do at least two things I don't want to do—just for the exercise. I will not show anyone that my feelings are hurt; they may be hurt, but today I will not show it.

Just for today I will be agreeable. I will look as well as I can, dress becomingly, talk low, act courteously, criticize not one bit, not find fault with anything, nor try to improve or regulate anybody except myself.

Just for today I will have a program. I may not follow it exactly, but I will have it. I will save myself from two pests—hurry and indecision.

Just for today I will have a quiet half hour all by myself and relax. During this half hour, some time, I will try to get a better perspective of life.

Just for today I will do unto you as I would have done unto me. I will think of you as I would have you think of me and I will speak of you as I would have you speak of me. But before I speak of you, I will ask myself these questions: "Is it good?" "Is it necessary?"

Just for today I will be unafraid. Especially I will not be afraid to enjoy that which is beautiful, and to believe that as I give to the world, so the world will give to me.

—ANONYMOUS

Of course money talks. Right now it's delirious!

—The Kernal.

Curriculum Construction In Health And Physical Education

Charles C. Cowell

WE MAY THINK of the curriculum in any area of education as a series of rich and guided experiences having some definite order of priority (progression) and directed toward the achievement of certain objectives. The curriculum represents that body of experiences by means of which we translate our social end educational philosophy into teaching procedures. As teachers we do this translating by consciously selecting and organizing learning experiences for the purpose of developing the personalities of pupils by new insights, sense of values, skills, and other abilities. The function of the curriculum then is to stimulate the students through appropriate experiences so that the objectives set up by the curriculum will be achieved.

The Elements of a Curriculum

A sound health or physical education curriculum cannot be planned and developed without a guide or blueprint. The design of a curriculum involves a number of important elements. All of these should be seen in proper perspective and relationship. These stand out rather clearly when we seek answers to th following questions:

1. What are the social needs of American democracy? What physical, economic, and social conditions are necessary in order to develop in children the physical, mental, emotional and spiritual qualities essential to individual health, happiness, and responsible citizenship? What socio-economic trends and forces have implications for the curriculum in health and physical education? Here we deal with *social philosophy.*
2. What are the ultimate values and principles that determine our thinking and action in education? What is the nature of pupils at various levels of maturation and what preferences, choices, values should guide us in the selection and organization of learning experiences at each level? In what directions should we try to change pupils? What are our objectives? Here we deal with *educational philosophy.*
3. What are the basic personality needs of young people that give them strong directional force (motivation) at various levels of development and how can these be adequately provided for in curriculum planning and development? How can we make instruction meaningful and functional? Here we deal with the *concept of "needs" or "developmental tasks."*
4. Since experiences are the very heart of the curriculum, what kinds of experiences in the various areas of content such as aquatics, games, sports, self-testing and the like are best suited to achieve our objectives? Here we deal with *means, content, and activities.*
5. How can we best organize learning experiences into units and employ various techniques such as correlation, integration, whole-part-whole or other principles to make learning more effective? Here we deal with *educational method* or ways of organizing learning experience.
6. How can we solve the problem of grade placement and progression? How can we determine the order of what we teach or what should follow or precede what? Here we deal with the important problem of *progression.*
7. How can we determine the extent of which we made good on what our curriculum objectives promise in the way of change in pupils? How can we appraise or evaluate adequately the quality of the development of pupils? Here we deal with techniques of *evaluation of appraisal.*

Steps in Planning, Development, and Evaluation of a Curriculum

1. Determine the basic philosophy of the school as a whole.
2. Decide the school's objectives of physical education and the relationship of these to the philosophy of the school as a whole.
   a. Allocate the objectives according to grade placement. There will naturally be some duplication.
3. Determine what learning experiences (activities) will best achieve these objectives.
   a. Allocate activities to the proper grade placement. Here again there will be some duplication.
4. Organize the experiences for teaching and learning into teaching units in order of priority (progression) for seasonal programs and daily and weekly schedules.
   a. Endeavor to associate specific content and activities with specific objectives.
   b. Prepare specific units for each area of content.
5. Develop and apply instruments for determining the degree to which the objectives of the program have been achieved.

Steps in the Planning and Development of Health Instruction

Health, either somatic or mental, cannot be left to specialized services however valuable these are. Health, which is a condition of the organism, like other generalized educational objectives such as guidance, character, or citizenship, must be an essential part of the educational program at all levels. This requires clarification of purposes and coordination of effort to achieve them.

A number of factors enter into the selection of the most vital content or experience which is to constitute health instruction. Some logical steps that the curriculum-planner might take are the following:

1. The school health committee should arrive at some basic agreements after considering the most valid data concerning school health problems and health instruction in particular. Their findings will result in a school health policy and a clear functional definition of good health and a statement of the responsibility of the school as a whole with respect to the important problem. Attention is being focused here on the health instruction program as only one aspect of the total school health program.
2. Major problem areas of "health concern" should be identified by examination of authentic research reports and survey techniques such as:
   a. Summary of federal, state, and local reports on causes of death, morbidity, reasons for school absences.
   b. Review the general, social, economic, and cultural background of the school locale.
   c. Review the findings of the school health examinations and the remediable defects exposed thereby.
   d. Inventory the health practices of the younger children by such items as, "What did you eat for breakfast?", "What time to bed?", and like questions.
   e. Study local student responses to problem check lists, opinion panels, and health interest inventories to identify needs.
   f. Analyze the results of health knowledge, health understanding, and health concept surveys in order to locate local "gaps" in health knowledge, concept development, and interpretation.

3. Identify by such survey techniques the major areas of "health concern."
4. List these major areas of concern in rank order and classify them under some category such as Food and Nutrition, Education for Family Life, and similar categories.
5. Under each major area of concern have a functional study unit in mind and list the important generalizations, principles, or inferences you want pupils to extract from the experiences you plan for each study unit. For example, at the high school level one of the many generalizations in a unit entitled "Life Goes On" would be: "Fertilization is the process by means of which the nucleus of the mobile male cell unites with the nucleus of the passive female cell."
6. Under a unit entitled, "Warding Off Infections" an illustrative single sample generalization would be, "The human body possesses natural defense weapons against disease germs which will function effectively only in the event that the body processes are permitted to work normally."

   For each unit a considerable list of valid generalizations would result. We wish to avoid *teaching* generalizations directly, but prefer to organize learning experiences so that pupils will be encouraged to extract the important generalizations by themselves.
7. For the secondary level, survey the possible *required* areas like General Science and Biology for possible health education content in each major "area of concern" (resulting from your surveys). Examine also such other areas as home economics, chemistry, and physical education.
8. After examining carefully your list of major "areas of concern" and what is determined as imperative, compare these with the health education content units in required areas such as general science and biology. Determine what remains *without* adequate attention.
9. Organize these areas into functional teaching units for *direct* health instruction.

The curriculum is education viewed from the standpoint of the *means* by which we achieve our purposes. The real curriculum is composed of what people *do* and the learnings resulting from what they do. Desirable attitudes, skills, and a grasp of a body of scientific understandings that will give a basis for intelligent self direction long after school days are over should be our goal.

Are We Squeezing In Vain?

Louis E. Bowers

THE HUMAN HAND plays an important role in the performance of innumerable daily tasks, which make up a vital part of man's existence. Although much is known about the human hand and its' workings, our knowledge of one phase of the hand, its' strength, is however lacking in many aspects. We understand the anatomical structure and kinesiological principles involved in flexion of the hand in gripping, but can we accurately measure hand grip strength?

The first attempt to measure hand grip strength using a hand dynamometer by a physical educator was made by D. A. Sargent in 1880. Since that time grip strength tests have become an integral part of strength test batteries, the best known of which are McCloy's and Rogers. Grip strength tests have also been used as a measure of the physiological growth of children, (1, 129-43) and as an indicator of physical condition and general athletic ability.

While observing hand grip strength test being administered using a hand dynamometer, of which there are at least eight different varieties, one cannot help but wonder which characteristics possessed by one individual make it possible for him to register a higher score than another. Is grip strength affected by the age, height and weight of the individual? What is the relationship of the area of the hand or length of the hand to hand grip strength?

A few studies have been conducted in an attempt to answer some of these questions. Everett and Sills reported a significant relationship between weight, height, mesomorphic components, anthropometric measures of the hand, namely hand width and length, and hand grip strength. The study involved 400 students whose grip strength was measured with a non-adjustable Nargansett dynamometer.

Burke in a doctorate study however stated that although hand length had a slight relationship with grip strength, measurements of the hand had little predictive value by themselves in determining grip strength.

These somewhat inconclusive and contradictory findings served to motivate further investigation concerning the subject by the author. It was decided to make several carefully selected measurements which included hand area, hand length, weight, height and age in order to compare them with hand grip strength test scores.

The first undertaking involved obtaining the grip strength scores of 73 randomly selected male freshmen students at the University of Maryland. Employing the use of recently calibrated manuometers, by means of the McCloy method of hand grip strength testing, their grip strength scores were obtained. After students' age, height, and weight were recorded a contour drawing of the dominant hand was made. The inner shaft of a ball point pen served as a tracing style for the drawings which began at the styloid process of the ulnar and ended at the styloid process of the radius.

It was necessary to make three tracings around each drawing with a planimeter and to compute an average

of the three planimeter readings in order to secure an accurate measurement of each subjects' hand area. Upon selecting a random sample of 10 subjects and remeasuring their hand area by the same methods, it was found that a coefficient of correlation of .90 existed between the two sets of hand measurements. This high correlation adequately justified the method used in obtaining measurements of the area of the hand. Further measurements of the length of the subjects' hands were also taken from the contour hand drawings beginning at the bi styloid process of the ulnar and radius and terminating at the distal end of the mid finger. Upon correlating hand grip strength scores as registered on the manuometer with the selected measurements it was found that body weight correlated highest with hand grip strength, having a cofficient of correlation of .62. Height and hand length followed closely with correlation coefficients of .56 and .48 respectively. The coefficient of correlation between the area of the hand and hand grip strength was .38 and the lowest correlation found was between age and hand grip strength being .05. This low correlation might be due to the small range of ages of the subjects used in the study.

While all of the coefficients of correlation were found to be statistically significant at the one per cent level of confidence, except that of age and hand grip strength, it is especially interesting to note the high correlation between the length of the hand and hand grip strength. This relationship warrants further study of the validity of adjustable and non-adjustable types of hand dynamometers as measuring instruments of pure hand grip strength. The validity of an instrument is generally accepted as meaning the ability of an instrument to measure what it purports to measure. In studies conducted thus far using hand dynamometers, attempts have been made to validate the dynamometers by calibrating them with known weights using a push-pull attachment before and after the testing period. This has served to check the accuracy of hand dynamometers, but has it really established their validity? Further investigation of the scores obtained on the adjustable and non-adjustable hand dynamometers in relation to hand length could possibly produce hand length tables or a hand grip index based on hand size.

To the knowledge of the investigator this study is the first attempt to measure the area of the hand for the purpose of relating it to hand grip strength. The results indicate that; (1) hand area is also a contributing factor to hand grip strength and (2) there is a possible relationship between the surface area of the hand and the amount of pressure one is able to exert on the manuometer.

It is conceivable that hand grip strength depends on how a person is able to grasp the instrument, and possibly we can only hope to obtain true measurement if the instrument used allows for maximum effort on the part of the user. Thus the instrument will have to be suitable to the individuals hand length and provide for measurement of pressure exerted equally by the entire surface area of the hand.

Man Looks at Himself

MAN'S ESTIMATE of man is revealed by the epithets applied to him. He's a horse if strong, a mule if stubborn, and a duck if queer. Here are a few more:

He is a beast when he puts aside ordinary intelligence.
A skunk when guilty of malicious treatment of others.
A monkey when humorous, with a touch of foolishness.
An ape when doing as others do, and lacking initiative.
A wolf when he is inclined to destroy.
A fox when displaying a high degree of acumen.
A worm when he allows other people to "step" on him.
A leech when living on other people's money.
A hound when he goes after things.
A mouse when listening closely without pretending to.
A rooster when strutting with too much self-importance.
A fish, generally "poor," when ignorant of what goes on.
A shark when making money rapidly.

The Bible speaks of man as being "fearfully and wonderfully" made. According to all the epithets, many men are fearfully and wonderfully unmade! Anonymous

Why The American Children Are Physically Unfit

Gertrude Krauss Shaffer

THE PHYSICAL INADEQUACY of the American children is a result of the nation-wide failure of the school physical education programs, which do not begin to compensate for the immobility imposed upon our children by increased mechanization and material wealth. By impeding the development of normal physical fitness in our children, these impoverished programs are exacting their toll. For the past two decades most school programs have been based on the theory that the by-products found on the periphery of a sound physical education program are the objectives. Physical fitness as the main objective is passé.

Therefore, if there is equipment, the student pursues the activities he may wish to utilize as recreation when he becomes an adult, or he plays games, spending much of his allotted time indolently trying to absorb the rules of the games, or awaiting a turn to play. Such programs neglect the compelling task at hand, which is to equip the student with a well-developed, well-coordinated, functional, durable, disciplined, beautiful body with which to enjoy life and be of service to the world. A child who likes to move and has been taught how to use his body effectively usually becomes an active adult who seeks active recreation.

The Child

Since the American children are growing to greater stature and maturing younger than ever in recorded history, the need for vigorous body building exercises to help the muscular development keep pace with the organic and skeletal growth is most acute at the elementary and junior high school levels. Most of the children who have permissive games programs and those who have not had physical education classes during the pre-pubital and adolescent periods of rapid growth fall below the clinical standards for minimum muscular fitness, and become even more substandard as time passes. Postural defects which were remediable in elementary school become irremediable in high school. The need for required, fundamentally sound, vigorous physical activity, based on physiological needs rather than educational theory, especially during the years of rapid growth, has increased steadily during the growth of our increasingly mechanized civilization.

Failing to recognize the needs of school age children, and unaware of the role that public school physical education courses play in the production of national fitness, many of the professional leaders who prepare our teachers and write the textbooks, encouraged by the sports equipment industry, are perhaps the real culprits responsible for the lack of fitness of the American youth. They ignore physiological need and stress the "integration of the total personality"—whatever that is. They can be compared to an obstetrician who throws the baby away and sends the placenta home with the parents. Consequently, the physical education teachers being trained by them are misguided in principle, uneducated in the fundamentals, and self-satisfied with a devastating ignorance of the meaning of their work. Unprepared as craftsmen of their profession, they are incompetent in the production of physical fitness.

The Teacher

The teacher who is unable, or neglects to teach correct body mechanics and conditioning has a physical education course without real substance and direction. There is no easy way to achieve physical fitness in our society. It takes uncamouflaged, unadulterated, do-it-yourself hard *work,* as does anything else that is worth while. We must get back to including old-fashioned calisthenics in the gymnasium classes. The direct attack of a good calisthenics program quickly strengthens weak muscles and helps develop coordination. It is obligatory for the teacher to equip the students with sufficient strength and skill to avoid injury. Badminton will not do it, nor will more time and additional space.

Efficiency demands that optimum use be made of the alloted time and facilities in order to produce the greatest good for the greatest number of students in the least time and space. Until this is being done, the request for more time and space can not be justified. It is reasonable to assume that those who can not conduct a program that achieves minimum fitness with minimum facilities, will not be able to achieve any more fitness in more time and space.

Normal vs. Average

There is a vast difference between what is *normal* and what is *average* when we discuss the physical fitness of the American children. The *normal* youngster is extremely active, the *average* American youngster, extremely inactive, lacks body control and has a very poor physique. The connotation of *normal, healthy* children implies more than freedom from disease or disability; it implies that they have *normal* physical *development* as well. It is not *normal* for any child who is free from mental and physical disorders to fail the highly controversial Kraus-Weber test, which is a clinical test for minimum muscular fitness to maintain *normal* health.

That the *average* of American children do fail it at a nation-wide rate of almost 60%, (European children at a rate of about 8%) is an indication that they are not receiving sufficient activity of the kind necessary for *normal development* in school and at home. Devising new tests for physical fitness, or changing existing tests will not alter the fact that the American children do not meet clinical standards for minimum fitness; the change must be made in the physical activities required of the children in their homes and schools.

With conditioning exercises, requiring less time than is necessary for the classes to take showers, done twice each week for part of two semesters, my own junior high school students had less than 2% failure of the Kraus-Weber test, although they had no physical education prior to entering junior high school. The improvement in appearance and well-being of the girls is far more rewarding than any test results.

Relationships

Mental and physical potential are parallel. There is a negative trend between intelligence quotient and Kraus-Weber test failure, that is, a decrease in failure with an increase of intelligence. The per cent of failure of the low I.Q. students was twice that of the high I.Q. students on the Kraus-Weber test given before they had had any physical education classes. On the test given one year later at the beginning of school, the low I.Q. students had three times the failure of the high I.Q. students, but the trend line for that test was considerably lower. The high I.Q. students are the taller and heavier ones, so the excuse that the American children fail Kraus-Weber because of their size is not valid. These findings are based on the test results of over 1,400 junior high school girls.

The students who had taken part in a play program in physical education classes for three years failed the Kraus-Weber test at a higher rate than the entering seventh grade students who had not had physical education. Without adequate exercise the girls became weaker and less flexible with age. This failure rate takes on greater significance when we consider the fact that many of the disinterested, overaged, low I.Q. students, who fail the Kraus-Weber test most frequently, have dropped out of school before reaching 10th grade. This play program *reduced* muscular fitness.

Formal Emphasis

Contrary to what the disciples of the play cult would have us believe, youngsters like formal gymnastics classes, especially when they understand the purposes and see the resultant improvement in themselves. Furthermore, they need the feeling of belonging. They like doing the same thing at the same time. Therefore, they prefer formal work because it is more democratic than permissive games in which the aggressive students frequently take over, causing the ones who need activity and acceptance most to receive the least. To produce self-controlled, responsibile adults, the discipline of some formal work in the gymnasium is most desirable. Calisthenics help mold the personality as well as the body; however, a teacher who uses calisthenics for punishment. as some do. defeats his own purpose.

Summary

A person with a well-disciplined body possesses a freedom unknown to those whose bodies constantly limit movement, endurance, strength, ability, balance, well-being and achievement. Formal physical education is not regimentation—it is democracy in its best sense.

Community Compensation

Richard Pilmer

Dedicated to young people of our society, and to motivation for living together in active, and harmonious communities.

The Other Person:

Visits container-ridden parks
Because we are litterbugs.

He gets killed in accidents
Because we are in a hurry.

She gets trampled in stores
On account of our greediness.

The Other Person:

Endures wet clothes because
We didn't slow down for a puddle.

He doesn't enjoy a sip of water, for
we left our gum in the fountain.

She stands on a crowded bus because
We forgot our manners.

The Other Person:

Might seem selfishly insignificant
But not so friend — boy or girl.

As our cities grow, and as we fail
In simple everyday courtesies,

The "Other Person" . . . is more often —
You.

Problems Of Financing High School Athletics

Edward J. Ryan

EACH YEAR, HERE in Oregon, our high school principals hold a two day conference, at which time, they discuss important problems in education. This year, their entire conference was devoted to athletic problems. This is interesting, because of the emphasis today on mathmatics, science and scholarship.

Many athletic problems were mentioned at the conference, but the solution to each problem appeared to be—*that if athletics were placed on a sound financial basis, most of the problems would disappear.*

This is true to a degree, but the problem of financing high school athletics is not a matter of balancing the athletic budget—or, stressing that athletics pay for themselves. The emphasis should be that athletics can be justified educationally, and as such, are worthy of the same financial support as any other area of the curriculum.

Unfortunately, many schools do not arrive at this philosophy until they have exhausted such money raising projects, as selling peanuts or washing cars in attempting to balance expenditures against revenues.

At this same principals' conference, one principal explained how a district's reclassification affected the revenue of his program. He had been the former coach and his school had held championships in most sports for over a long period of time. The school had money in the bank and a well-rounded athletic program. Being a success, he was elevated to the position of principal. Later his school was placed in another district because of geographical reasons. In three years, his school was not only in the lower division in all sports, but the school athletic accounts were several thousand dollars in the red.

He was faced with a serious decision—either to curtail the athletic program — or ask the School Board to pay the bill. To his amazement, his Board said "We will pay for the program."

The point of this illustration is not the fact that the School Board accepted responsibility for underwriting the program, but the fact that the loss of finances, rather than a belief in athletics forced the principal to ask the Board for help.

It is likely that many more athletic programs would receive full financial support if the individuals who are assigned these responsibilities would attempt to sell the merits of the athletic program rather than trying to show a balance on a financial statement.

Factors to be stressed in gaining full financial support are that athletics not only satisfy all general objectives of education, but more important—can be justified on their merits. They do not need to be justified in terms of the physical education program, the intramural program, or the recreation program that is offered in your community. The point to hit hard is that *high school athletics can be justified on their own merits!* They are justifiable as are many other programs that are offered in the high school. Any program should be sold on its own worth.

Portland is fortunate that many years ago, the idea of full financial support for athletics was accepted by the School Board and the community. Even though the Board was willing to underwrite the athletic program, in the beginning, the newspapers and leading citizens inaugurated Jamborees and other city wide events in an effort to bring in revenue to offset what the district spent.

Gradually as the idea of equalities to all schools became more and more acceptable by the community, newspapers and local citizens faded into the background.

Now the Portland's entire athletic program is supported by the same funds that support the other areas of the school. All monies collected from athletic admissions are deposited in the same General Fund as are taxes, fees or any other revenue of the District. The one thing that is basic—is that no comparison is ever made between revenue collected and the cost to operate the athletic program. We merely state that it costs so much to operate the athletic program. If comparisons must be made, Portland feels that is healthy for expenditures to excel receipts. This helps to solidify the philosophy that athletics are worthy of financial support.

This may appear idealistic to some, but this procedure has been in operation for over 20 years. It works and Portland is proud of it! This type of financing, automatically solves many problems that occur in schools which depend upon commercial support. Many of you have been in schools where you had to sack peanuts to maintain an athletic program. This does not have to exist. Don't wait until you are in the red to try to sell a program of full financial support

Even though an athletic program might be underwritten—there may be financial problems. Sound policy calls for a building of a budget each year. This in turn, requires the gathering of accurate in-

formation from which to estimate expenses.

One must remember that a budget is only an estimate. It does not mean that all money must be spent. There must be controls, and therefore, there should be a written policy reagrding expenditures.

Be sure that all expenditures which are needed have Board adoption—for this is your only authority to spend.

Some problems, and some suggestions:

1. Frills—How much scouting, games, movies, etc. should be authorized? By having coaches make recommendations each year, we attempt to anticipate these requests beforehand. Because coaches usually do not control the purse strings some have a tendency to recommend more things than are finally approved. However, this is a healthy expression, because it aids in the gathering of accurate information that eventually formulates policy. If an item is not in the budget, it's likely turned down.
2. Equipment—Upon assignment, new personnel must accept or reject inventories for which they are responsible. No equipment is to be loaned to individuals or organizations. All equipment is purchased through bids. All athletic clothing is washed and not dry cleaned. Organizations outside the schools, such as Dad's Clubs are now not allowed to give equipment to the schools. We find that this saves us many dollars each year.
3. "Feeder"—Athletic Programs.—We save on this item. We have no program below the high school level, but in spite of this, we have won 50% of all trophies given on the state level. We believe in supporting one program well rather than partial support to all grades.
4. Major—Minor emphasis on sports—All head coaches receive the same salary. All assistant coaches receive the same salary, but less than the head coaches. All letter awards for all sports are the same size. All of the trophies are the same size.

Just because expenditures for the athletic program might exceed income, this is not deficit spending. Athletic programs should be supported without regard to income, and now is as good a time as any to gain this support. It should be remembered that athletics receive the greatest support during the times when the so-called academic subjects are also receiving public support.

Track Meet

Jack Caldwell

Down ten thousand cinder beds
running, r u n n i n g, RUNNING, R U N N I N G !
come six upright moving forms
of flashing yellow, blue, red,
on
iron rusted spikes and hairy pipestem legs,
while
sweating mammoths thrust
the hostile shape of
wood and iron
up and out to
up
up
up
up temporary rest
as
fearful legs on sawdust paths
hit the trail to see how far
and
up
down
up
down
up
down they can go!
Oh, the track meet!
I always see them, never miss them,
couldn't miss one,
and not see
the sun bathed spikes
and the heat
and excitement
of the Saturday afternoon.

The Geriatric Aspect Of Structural Asymmetry In Childhood

Charles LeRoy Lowman

THE TERM "GERIATRIC" is here used in the sense of the aging process which begins at birth, and not from the standpoint of "gerontology," which refers to the study of the aged.

In the high percentage of all children who have some form of faulty body mechanics, their resultant postural malalignment induces far more wear and tear on their joints and growth cartilages than on those whose skeletons are symmetrical. In the malaligned the stress of gravity is not symmetrically placed on the joints, (analagous to the bearings in a machine). These are out of true and respond to stress caused by asymmetrical wear.

When body segments are not in proper relationship one to another the joints in each segment usually carry unequal amounts of stress. This results in postural strain, directly in proportion to the degree of imbalance that exists from the faulty alignment. The muscle motors that activate the joints of necessity become adapted to the positions of the segment and its working parts.

To illustrate: Take the shoulder in a case of common fatigue slump. Head is forward, dorsal spine curved backward, and weight of arms is forward of the lateral gravity line. The pectorals are adaptively shortened as the scapulae swing forward, and the scapular adductors (the lower trapezii and rhomboids) are proportionately stretched.

When the scapulae swing forward they rotate also, so that the tip of the acromion lies about two inches forward and about one to one and a half inches lower. This throws the center of shoulder joint motion excentric to its normal working position. Therefore, when the arm and hand are used the length of the arm lever (the radius of the circle of circumduction) cannot act in a true sagittal plane because the gleno-humeral articulation faces somewhat forward. Now, there is, aside from the shortening of the pectorals and serrati, also a positional adaptive shortening of the capsular ligaments. These, unless kept stretched, tend to become habituated to this position.

This round shoulder posture does not lend itself to optimum function in performing many athletic feats or gymnastic work. In activities that require carrying the hand far back (golf, putting the shot, throwing discus, javelin, etc.) this muscular imbalance interferes with range of action. Follow through, then, is not as good as it should be, due to the shortened anterior capsule and shoulder adductor muscles.

Skeletal asymmetry, either hereditary or acquired, influences growth and function, so that adaptation must be toward further asymmetry, both structural and functional. About 90% of all children have some increase of normal anterior tilt of the pelvis. This puts the hip joint in flexion and the lower spinal joints in increased extension.

About 40% of all persons have some lateral tilt of the pelvis. This may be due to any one or more of six different factors: unilateral lowering of one arch, difference in the degree of angulation of the neck of femur on the side, or a difference in the heights of the sides of the body of the sacrum, or a difference in the size of the ilium, and angular deviations at the knee (bowleg - knock-knee).

In recalling the old law of physics, "You cannot bend a flexible column in two planes without a torque," it is seen that the tilts and torques of the pelvis produce a compensatory scoliosis with asymetrical tension and development of the back muscles.

When the pelvis is level all femoro-pelvic muscles and ligaments are symmetrical, with the weight of the same on the two sides. But if a lateral tilt exists, the thigh of the low side is in abduction, and the opposite thigh on the high side is in adduction. An imbalance results between adbuction and adduction; likewise, a tight gluteus medius and maximus on the high side and shortened ones on the low.

These deviations may be of such mild grade that they will be missed in a casual examination. But if such a child is put on a so-called muscle-building program to improve his muscle strength, he will of necessity produce increased stress on all the muscles and ligaments that activate and control the stability of asymmetrically aligned points.

Unfortunately, the parents and the coach of an apparently well and sturdy boy, who never misses practice, are loath to believe that any harm can come to him. But if he is coached to run, jump or hurdle, short muscles will become shorter, and the skeletal asymmetry will increase. The short leg and pelvic tilt will remain uncorrected and poor total alignment and future trouble will develop. Of this result the coach will not be aware since it is not likely that he will see the boy after he leaves school.

The more force that is applied to a shaft and its bearings, the greater is the necessity to have an equal structural strength to meet such force. Perfect alignment must also be present if the bearings are

not to burn out.

The time will come, we hope, when each person in physical education, health and recreation accepts his proportion of the responsibility for the student's future health and well being in the post-school years.

Recently a school administrator was reported to have said that in the interest of economy, his school's H. P .E. R. work should be discontinued. Probably he was a new hand, unaware that for years his city had been an outstanding example of the good that can accrue to thousands of young people from excellent work of physical education and corrective departments.

It is true that all the joy of life for the physically sound should not be sacrificed for the potentially inefficient. The important thing is to discover those students with disturbed body mechanics, group them so that they have basic anti-gravity exercises; then, when they are ready, work them into a regular schedule. But throughout his work each coach and teacher of physical education should think seriously of the future fitness of the man-to-be while he is handling the boy.

My Aching Back—A Challenge

Carlton R. Meyers

THE OFT-HEARD expression, "my aching back," may be appropriately used, both literally and figuratively, to depict a situation which has been manifested in physical education. This situation results from the indiscreet use of a particular exercise despite the contradiction of basic concepts in applied anatomy and kinesiology upon which physical education should be based. While the specific illustration may not appear especially vital on first thought, without a doubt the import of the basic issue underlying it cannot be denied or should not be passed over lightly.

Certainly, we cannot condone practices that are not conductive to wholesome development and may even pose the threat of being inimical to certain individuals. This is especially so when the dictates of our scientific knowledge and understanding are ignored. When these basic understandings are overlooked, physical education is obviously susceptible to the rhetorical challenge of critics who ask: Have physical educators become so involved with associated and concomitant learnings that they ignore some of the principles derived from the biological foundations of physical education? It is generally recognized that preparation for the best possible life which is our inheritance to attain becomes, in essence, the goal of education toward which physical education aspires to contribute. Alertness to the soundness of the many practices through which physical education purports to make its contribution becomes a continual necessity. We must never fail to analyze critically the activities used in physical education programs in terms of their provision for wholesome development.

An Example

Let us now turn to the specific illustration which incited presentation of this provocative point of view. Reference is to the type of practice that gives critics of physical education reason to challenge whether we are not neglecting or dealing inadequately with the "physical" in physical education. A flagrant indication of the need for critical, analytical thought in program content involves the continued and imprudent use of double straight leg raising exercises in supine position, including test No. 3 of the Kraus-Weber series.

This indiscriminant utilization of such leg exercises apparently results from the fact that many physical educators have either failed to heed certain basic concepts derived from the biological foundations of physical education or do not understand them. In recent months an increasing number of schools have begun to use the Kraus-Weber Test either as a means of determining the fitness of their children or to compare the results with another test of a similar nature. As in the past, this specific practice continues to be used as an exercise in physical education programs by many teachers, both old and new.

Be that as it may, we might question the necessity for concern over this matter. Certainly, when a practice fails to meet satisfactorily the basic consideration of being physiologically and physically wholesome, it does not warrant inclusion in physical education programs. There are stages of physical development when this particular exercise can be utilized effectively. However, the concern lies in using this exercise in instances where neither growth nor development have proceeded to the point that the practice can be employed beneficially and without possible detriment.

The extent of misconception and misunderstanding pertaining to this matter is disheartening in view of the facts, their interpretation, and the admonitions presented in a number of professional publica-

tions, as well as the precaution mentioned in the Kraus-Weber Test directions for test No. 3. This practice should be utilized as a test or exercise only when the abdominal muscles have sufficient strength to support the weight of both legs, together with gravity component, as they are raised from or held off the floor. Properly done, the abdominals fix the pelvis and lumbar spine, while the hip flexors are directly responsible for the leg action.

When the abdominal muscles have insuffiicient strength to support double leg raising, the lumbar spine becomes hyperextended. In such cases, rather than exercising the abdominal muscles, these muscles become overtaxed, and a strain is placed upon the lumbar spine. When any muscle is taxed beyond its capacity, it is more likely to be strained than strengthened. Technically speaking, if the hyperextension involves any appreciable degree, then the psoas muscle will conceivably have its line of pull shifted behind the axis of motion. With this resultant shift in relative position the psoas muscle would then accentuate lumbar hyperextension in effecting hip flexion. When sufficient strength exists to warrant use of this exercise, attention should be directed to cessation of the exercise as soon as the lumbar spine begins to become hyperextended.

Again, we may question why many physical educators persist in utilizing this double leg exercise in their programs, when undoubtedly many of these individuals are aware of the aforementioned facts. Perhaps, the lethargic attitude which permeates the use of exercise in many instances accounts for this situation, in contrast to programs wherein exercise administration is approached as a truly educative experience. Similar difficulty prevails in explaining the not only continued but apparently increasing utilization of a test item which may subject weak muscles, ligaments and the lumbar spine to undue strain. The Youth Fitness Test of AAHPER, fortunately, now provides us with a new and wholesome test complete with norms. This new test should foster efforts to remove the emphasis and use from a test item which may be conductive to strain rather than wholesome physical development.

Illustrative of an instance in which support is given to a practice generally recognized as relatively unsound, a recent letter to the Editor of the AAHPER stated that aside from its value as a professional tool the Kraus-Weber Test may well prove to be the best public relations opportunity handed to physical educators in almost two decades. This public relation opportunity cannot be denied. Conceivably, however, it could prove to be either poor or harmful publicity, inasmuch as this comment fails to recognize the potential danger in endorsement of an exercise that cannot be justified scientifically as a "tester."

The specific intent of this article is neither to degrade the particular exercise cited, which can rightfully have a place in a developmental program, nor to ridicule supporters of the Kraus-Weber Test which contains the exercise as a test item. Rather it is to encourage critical analysis of the many and varied practices on the basis of the biological, psychological and sociological foundations of physical education and in light of the generally recognized objectives of physical education. In addition it is hoped that the reader will be provoked into accepting the challenge. The physical education profession will benefit from such action.

In summary, an effort has been made through a specific example to depict a situation that presents a great challenge to physical education. Now, more than ever, the public is appraising the role of physical education as we concern ourselves with the program of "Operation Fitness U.S.A." It behooves the members of the physical education profession to reflect in practice the dictates of scientific thought concerning the human body and its development, upon which physical education, as we know it and would have it, is based.

What Kind Are You?

1. Some folks are like wheelbarrows — no good unless pushed.
2. Some are like canoes — they need to be paddled.
3. Some are like kites — if you don't keep a string on them they will fly away.
4. Some are like footballs — you can't tell which way they are going to bounce next.
5. Some are like balloons — full of wind and likely to blow up unless handled carefully.
6. Some are like trailers — no good unless pulled.

Which one are you?

(Adapted from the News Bulletin, Washington Assn. of Wheat Growers.)

Increase In Leisure

Tom Brennan

PHYSICAL EDUCATION TODAY is constantly being faced with the necessity to incorporate into the program, activities or sports that have a great carry-over value. Optimists predict the next few years will bring upon the American people an increase in their time of leisure. This prediction is based upon decreased working hours, brought about by the increasing trend to automation and modern technology. How will this movement affect our school physical education programs?

To prevent living an inactive and sedentary life after graduation from school, our youth of today must be taught beneficial carry-over activities, that can be participated in during free time. As physical educators, we must re-emphasize the importance of, and inclusion of individual, dual and group carry-over activities into our school programs; namely, golf, bowling, handball, fishing, swimming, archery, skiing, and skating.

This type of programing is being neglected in many of our schools today. Reasons are various, however, the primary excuses are as follows:

(1) the lack of equipment and adequate teaching stations, (2) too expensive, (3) crowded conditions, (4) too difficult to instruct, (5) too dangerous, (6) available community facilities too far from school property, (7) too troublesome, or too something or other to bother with.

The fundamental principles behind all these excuses, can be eliminated through the utilization of local community facilities, city recreation facilities, improvising your own instructional equipment, using movies, slides, films, and other visual aids, and possibly using your own personal equipment for class demonstration of basic skills and other instructional purposes. When did we have, or have to have the best in facilities and equipment? With the inclusion of these neglected "recreational type" activities in our programs, we will be meeting the challenge by introducing to our school youth, carry-over activites that can be participated in during their time of leisure, especially in late years.

By acquainting students with these activities, we might also be answering one of the most crucial and important problems facing the profession today. What causes some people to participate in recreational activities and others not, and how are these attitudes and habits formed?

One reason millions of people participate in recreational activities such as golf, bowling, and swimming is because these activities were taught in their high school physical education programs. Through recreational participation, many people have attained methods of living an active, pleasurable, and satisfying life.

If we physical educators really believe in what we preach, let's all give our students something they can use in later life, activities and sports they can participate in during leisure for decades to come.

Some Thoughts

A highbrow is a person educated beyond his intelligence — *Matthews.*

A good listener is not only popular everywhere, but after a while he knows something. — *Mizner.*

Hating people is like burning down your own house to get rid of a rat. — *Fosdick.*

A cynic is just a man who found out when he was about 10 that there wasn't a Santa Claus, and he's still upset. — *Cozzens.*

What on earth will today's younger generation be able to tell their children they had to do without? — *Arnold.*

There's one thing about baldness: it's neat. — *Herold.*

Trends In Health Education*

F. B. Haar

1. Requiring all secondary teachers to take a health education course, including some work in health guidance and health services.
2. Requiring advanced work toward an *administrative* position to include preparation in organization and administration of the school health program.
3. Requiring credit for each year of health and physical education in the secondary schools for graduation.
4. School districts have a coordinator for health, safety education, physical education be combined into one administrative unit.
5. More colleges and universities are offering a major or/and a minor in health education to meet the various state certification requirements.
6. More colleges and universities are offering graduate work in health and safety education, including traffic safety.
7. Better cooperation between health education and the medical professions.
8. More community health education workshops (ex. State of Penna.)
9. More states are writing curriculum guides for health instruction and health services.
10. More local school boards and local medical societies are using the results of the conference on Physicians and Schools for their philosophy and objectives.
11. Compilation of a "Who's Who" in health education in each state and district.
12. Setting up health education standards for the various states and districts (ex. Oregon).
13. Requiring youth to take a driver education course, subsidized by the state.
14. All majors in physical education have a minor in health education and have field experience in health as well as physical education.
15. Close cooperation between medical services in the colleges and universities with the health instruction phases in the general college courses and the professional courses (ex. immunization programs).
16. Using the general college health course as a continuing freshman orientation program, devoting many weeks to a study of student problems under the heading of mental and emotional health.
17. Screening for *emotional difficulties* in medical exams for teachers.
18. Fewer and better health examinations for school children instead of the yearly examination.
19. Concentrated health course in the high school curriculum.
20. Closer cooperation between the school health educators and public health educators.
21. Better cooperation between state boards of health and state departments of education in promoting health education in the states.
22. Physical education gains more dignity by affiliating with the *health professions* (ex. "Health Experts Meet in Portland", national convention, etc., listed in newspapers and magazines).
23. In some of the largest cities in the United States the older people in the physical education and coaching professions who have some health education background teach health education courses or guidance positions. This is true of the women more than of the men.
24. Some colleges and universities offer driver and safety education courses and offer major and minors (ex. Mich. state, N.Y.U., etc.).
25. More doctorates in health education are being hired to coordinate and teach health courses in colleges (demand far exceeds the supply).
26. The best positions in health and physical education are in certain states where one finds better tenure, salaries, working conditions, etc. (*ex. California and Florida*).
27. More and more emphasis will be placed in the area of Geriatrics. People are living to be older and some work will be in this field.
28. The best sellers in textbooks are the health education books for the college general courses. Quite a few of the professional physical education books are finding new authors for their revisions.

The future looks promising and the field should attract many professional candidates.

*Talk presented at the Graduate Student Seminar, April 14, 1959, University of Oregon.

Edited by R. L. Wickstrom

Note: The purpose of this section is to present a summary of various procedures which are being utilized in contemporary education through a description of their advantages, disadvantages and special characteristics. The hope is that such treatment wll increase the reservoir of concepts, devices, techniques, and procedures from which a better selection of methods might be made for the more effective conduct of the program of physical education, in health education and safety, and in recreation.

Our readers are urged to send in suggestions, ideas, and specific contributions to R. L. Wickstrom, University of Wichita, Wichita, Kansas.

Organization of Intraclass and Interclass Track Meets

EVERY ACTIVITY THAT has sufficient value to be included in the educational program should be made as interesting to the students as possible. It is the responsibility of the instructor to create and then maintain interest in whatever activity is to be taught. Capable performers ordinarily are enthusiastic about participating in any type of physical activity but unskilled performers frequently are not. Therefore a special effort must be expended to help the less skilled student enjoy physical education.

Track and field activities can be made interesting to all members of physical education classes by providing *wholesome competition.* The term "wholesome competition" as used here implies a contest where everyone has a reasonable chance of making a favorable showing or where the performance of each individual is important in a team effort. Carefully organized interclass or intraclass track meets can meet the above-mentioned criteria. The traditional concept of having each person compete against his own performance is theoretically sound but is not so interesting as competing against another person or against another team.

Preparation of Students

If the track meet is to be a strong incentive it must be publicized by the teacher. He should inform the students of the proposed track meet before the track unit is begun. Discussing the class procedure for the organization and conduct of the meets would help to stir up interest in the competition. If the teams are to be selected by the students, arrangements for doing this may be made during the early discussion.

The track unit must prepare the students for the meet by providing proper instruction and adequate practice in the events. It must also make provision for sufficient physical conditioning so participation will be effective and injuries avoided.

Time and field trials supply realistic experience and yield helpful information on individual performances. While field events are inherently self-testing items, track events are not. Students can know how they are progressing only if they are given their times from actual time trials. Accurate judging and officiating for the official track meet is possible only if the students who act as assistants can get experience in performing their duties. Conducting the trials would provide them with the needed experience. Unless physically unable to participate, officials should be included actively in the track meets.

A. *Forming Teams.*

Divide the class into two or more teams with each team having approximately fifteen members (10-20 would be the outside limits). The common methods of determining teams may be used such as (1) having elected captains choose in the privacy of the teacher's office, (2) having the teacher decide the teams by random selection, or (3) having the teacher select the teams by judgment on the basis of student ability. If the students so desire they could be permitted to select names by which their teams would be identified.

B. *Team participation.*

1. All members of each team participate in each event in the track meet. The total of the times of all performers on a team for a particular running event would represent the team's score for that event. For field events the team's score would be the total distance or total height. The number of places for scoring in an event would be determined by the number of teams in the class. Likewise the number of points awarded for each place would be based upon the number of teams and the number of places. If there were three teams there might be

three places and first, second and third places awarded 5, 3, 1 points respectively. When the number of members on each team cannot be equal the team's score for each event would be the average rather than the total.

This method has several strong points: it recognizes each individual and makes his performance significant; it provides a record of everyone's performances for marking; it stresses team effort in an individual activity.

2. Require each member of each team to participate in three events but do not permit anyone to participate in more than three. This method stresses the opportunity to concentrate on the events in which the individual has the greatest interest and skill. The members of a team can calculate the way to get the best performances for each event and the best team eort. There are some obvious shortcomings in this plan: outstanding performers are limited in the way in which they can demonstrate their skill; specialization is encouraged when general development might be more desirable; weak performers may not be able to compete successfully in any of the events.

3. Provide matched competition based upon time and field trials conducted during practice and instruction. Each event of the track meet would be a series of contests with matched groups consisting of one member from each team. The winner of the group would receive one point for his team for that particular event. Total points accumulated at the end of the meet would determine the winner of the meet. Again shortcomings appear. Unless special provision was made for timing there would not be individual records on the running events; there would be little incentive for boys who knew they would be defeated or had little chance of scoring; matching individuals for each event when the class is large is time consuming. This method entails the keeping of a running score on the meet which adds interest because everytime a group competes the score will change. Also each student competes with someone of roughly comparable ability in each event.

C. *Exceptionally large classes.*

When classes are very large each boy could be put into a group according to his classification index and be assured of competing on a reasonably comparable basis. The McCloy Classification Index (CI = 20 age + 6 height + weight) or the Neilson-Cozzens Classification Index (CI = 20 age + 4.33 height + weight) may be used. Tables for easy computation are available ,as are suggested divisions for grouping according to the classification index. Such an organization would mean that there would be a track meet for each broad classification group in a class. Since each person would be competing within a broad classification there would be individual rather than team competition. An advantage in using this organization is that it closely approaches the objective of "wholesome competition."

Organizing Interclass Track Meets

The interclass meet should in most cases supplement the intraclass track meet. While interclass meets are primarily paper work, friendly interclass rivalries sometimes emerge. From the standpoint of interest, students like to be able to see who are the top performers in each event in their grade. This alone can justify the time required for the instructor to calculate and post the results of the meets.

There are two commonly used ways of organizing interclass track meets.

1. Interclass meet by grade.

When there are several classes for boys of the same grade, one class may compete against the other on a team basis with each class constituting a team. This kind of arrangement emphasizes the performance of the outstanding members of each class and gives them perhaps more strenuous competition than is offered by the intraclass meet. The instructor would take the best performances in each event in each class and calculate the outcome of the meet on that basis. Proper attention should be focused upon the outcome of the meet so spirited competition is developed.

2. Interclass meet by classification index.

This type of meet could hardly be put on a team basis unless the classes were exceptionally large. The instructor would compute the meet results by selecting the top scores for each event within the broad divisions based upon classification index. After the results have been posted each person could compare his performances with the top performances for each event by members within his classification division.

There is not the immediacy in the interclass meet that there is in the intraclass meet. That is to say direct competition is more intense and interesting than indirect competition. Therefore the intraclass track meet should receive prime emphasis with attention directed to the additional challenge of the interclass meet.

Sorry!

In the March issue, the following quotation by Bauer was inadvertently omitted from the article Research in Human Relations by Earle F. Zeigler.

"(1) detailed observation of administration in process, including events and decisions as they unfold in administrative situations; (2) careful and skillful recording of observations of numerous ongoing administrative situations; (3) penetrating analysis of the data in each recorded observation, and comparison with data from other observations; (4) abstraction of tendencies or uniformities in the process of administration; (5) generalizations of a tentative nature concerning various uniformities or tendencies; (6) testing of generalizations by continued observation, recording, and analysis."[3]

Edited by C. O. Jackson

Swiss Federal School for Gymnastics and Sport

Richard H. Pohndorf*

FOR MANY YEARS in Switzerland, sport and gymnastic associations along with educational groups desired a national sport school. In 1944 the Swiss Government began to blueprint a National School of Gymnastics and Sport to be built at Magglingen, (French name, Macolin) on a ridge of the Jura mountains, some 3000 feet above sea-level and 1200 feet above Biel (Bienne). Construction was started early in 1946 and in 1947 the school came into being.

Today, the school is managed by Dr. Ernst Hirt; Dr. K. Wolf is the assistant. A faculty and staff of over 100 people provide instruction, publication, and film services.

Facilities

The facilities, along with its unusual site must be seen to be fully appreciated. The current facilities include:

- The administration building contains offices, bedrooms, common rooms, dining halls with a splendid serving kitchen, library, film library, music room and a lecture hall equipped for film projection.
- Three dormitories containing rooms with two, three, or four beds, lecture and recreation rooms.
- A fully equipped gymnasium.
- Two small gymnasiums, one for women's dance and gymnastics, the other for boxing, fencing, and wrestling.
- An indoor athletic training hall.
- A fully equipped 400 m. track with ultra-modern timing devices available for competition and scientific research provided by the OMEGA Watch Factory.
- Three playing fields with 100, 200, and 300 m. tracks with complete facilities for jumping and throwing events.
- A 25 m. swimming pool with a special offset diving section.
- Additional facilities include a hard surface sports ground, tennis courts, football (soccer) fields, a short distance shooting range and a sauna (Finnish steam bath).

A physiological institute is in the process of development. At present, a nucleus is temporarily installed in the main administration building which is supervised by the school doctor. This is available for researchers who wish to study problems of sport physiology, sport mechanics, and so on.

Mission of the School

Switzerland has a federal form of government much like the United States. Instead of states, however, they have twenty-two cantons who retain control over local affairs, with the federal government handling matters involving the entire country. As such, education in Switzerland is mainly the concern of the local cantonal education authorities and is rarely directly controlled by the federal government.

Physical fitness receives a great deal of attention in official circles and a federal law regulates physical education nationally. It is for this reason that the school is under the authority of the military department; however, the school and its staff have civilian status. The school is civilian in nature and is based on principles of modern physical education. The only exception is when it conducts an occasional short military course for military personnel.

The school is the federal government's administrative body for sport in general. In Switzerland, the individual sport associations are not controlled by the state, but nevertheless some of them receive limited financial grants from the federal government. Such grants are controlled by the school. The school also controls certain funds which are used to further the training of physical education teachers. This demon-

*Dr. Pohndorf of the University of Illinois College of Physical Education spent the academic year in England and the continent on a sabbatical.

An Active Soccer Practice

strates that the school institution gives considerable leadership and exercises substantial control over physical education policy in Switzerland.

Scope of Programs

A Diploma Course is provided for professional physical educators. Currently this is a two-year concentrated course for both men and women, but it is to be extended in the near future. It conducts short courses for physical education students from the universities and also provides educational programs for voluntary leaders in many sport activities.

Since the school is in charge of the administration of the preparatory school instruction of youth, it gives leadership education aimed at giving the youth of the country the best possible all-around basic physical education in a wide variety of activities including those of a recreative nature. It administers the finances involved, provides instructors and makes available equipped which in many cases may otherwise be beyond the means of the young people involved.

Courses are administered dealing with the construction and maintenance of sport fields, facilities, and swimming pools. Two-week military courses in physical education which every medical doctor is required to take during his officer's training school and three-month courses for officers and non-commissioned officers are periodically scheduled.

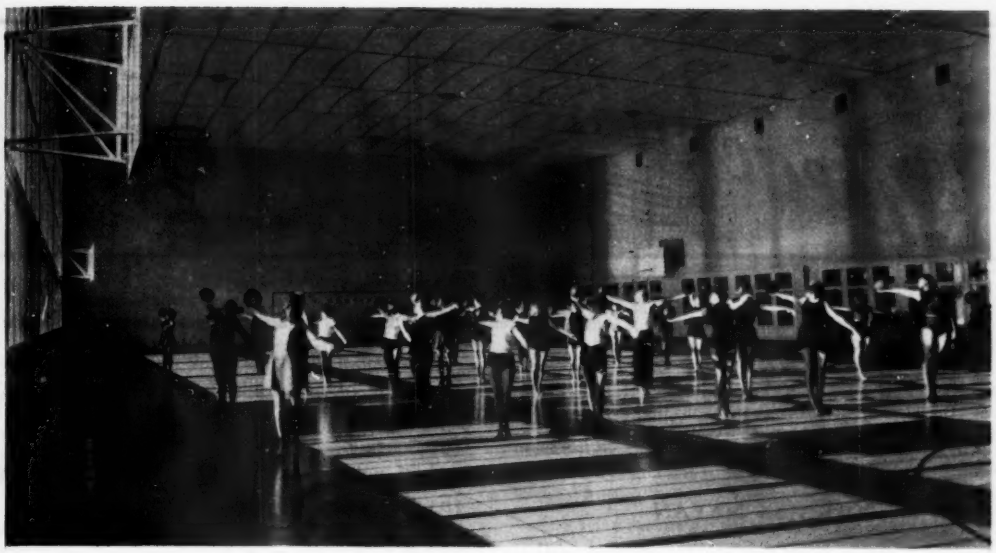
In addition to these courses which are directed by the instruction staff, short courses are conducted by various sport organizations in the country for sport officials, for coaches, and some for the athletes and players themselves. Generally, the associations provide their own instructors; when this is not possible, then the resident instructors of the school conduct the program and as a group are competent in a wide variety of activities.

To illustrate some of the activities conducted by the school in 1954, there were forty courses with a total of 1600 participants taking part. These were organized and directed by the staff itself. An additional 120 courses with 5600 participants were organized by various sport and gymnastic associations. Somewhat less than 5 million people live in Switzerland and since all are within easy travelling distance of Magglingen, it is convenient to conduct short courses on a national basis.

Further assistance towards the centralization and promotion of sport in the country is provided by publishing a monthly magazine in French, German, and Italian dealing with all matters connected with the method and theory of sport instruction as well as with general problems of physical education. Technical films on various sport disciplines are also produced.

Recognition

The Magglingen School was awarded the silver medal for its design by the architectural competition organized in connection with the 1948 Olympic Games in London. It was further honored with an Olympic Cup by the International Olympic Committee in 1954 for its activity and merit in the field of sport education.



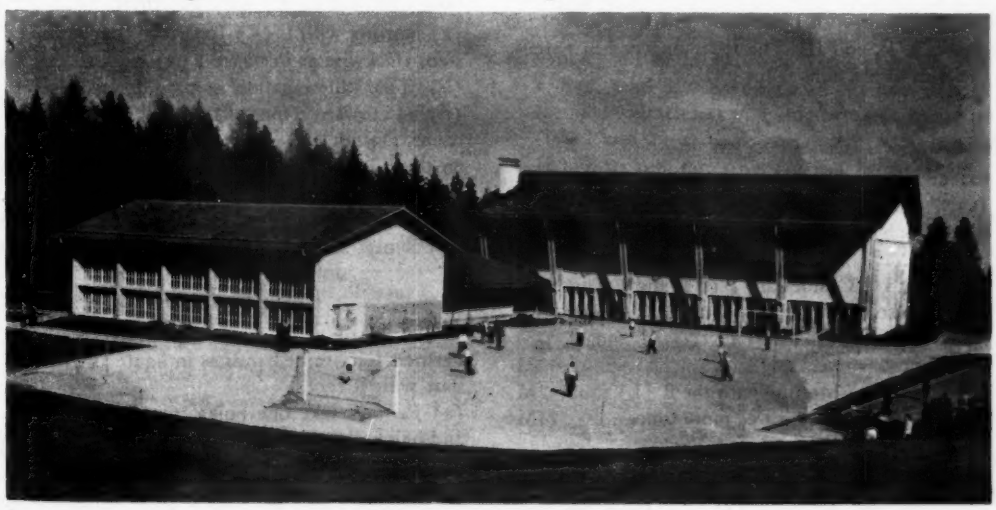
Women's Dance and Activities Gymnasium

The feeling in Switzerland is that the work goes beyond the purely physical, and that results should not be measured merely in terms of performance.

The first director, Arnold Kaech, stated that

> "The chief object of the National Sport and and Gymnastic School is not merely the encouragement of prowess but its aim is to insure that physical culture shall be intelligently incorporated into the general system of education. . . ."

In conclusion, it might be stated that such an amateur sport promotion center would be a definite asset to each one of our states and to its population. The sport loving Swiss are very happy with this arrangement and feel it is making a fine contribution to the realm of sport education and participation by young and old alike. They have no problems of professionalism in sport but devote much time, effort and money to promote and educate professional leadership, who in turn conduct amateur activities. This is a most noteworthy endeavor and one to be admired and recognized as most wholesome.



Player Practice Session

Edited by Cecil C. Franklin

Anyone interested in contributing square, round, and folk dances should write Dr. C. C. Franklin, Men's Gymnasium, Southern Illinois University, Carbondale, Illinois.

The following are simple Philippine dances taught by Miss Flany Domingo, a graduate assistant in the Department of Physical Education for Women, and contributed by Jean Stehr, Assistant Professor, Department of Physical Education—Women, Southern Illinois University

POLKA SA NAYAN

(Tagalog)

Record—Mico (Philippine) *Polka Sa Nayan* No. MBU 727-56.

This ballroom polka was popular in the province of Batangas in the old days. It was usually danced during town fiestas and in big social affairs.

Formation: When performed for demonstration, dancers may be grouped into sets of four pairs in square formation, each couple occupying a corner; or they may be arranged in longways formation. When performed as a ballroom dance, couples may face in any direction and scattered around.

Note: Boy starts with L foot and girl with R foot in figures I, II, and III. The letter or word in parenthesis in instructions is for girl.

I

Music A—Social Dance Position

Extended arms toward audience.

(a) Starting with L(R) foot, take four polka steps around clockwise, finishing in original position 4M

(b) Point L (R) sideward (cts. 1, and), point L (R) close to R (L) (cts. 2 and). Take one polka step sideward left (R). (cts. 1 and, 2, and) 2M

(c) Repeat (b), starting with the R (L) foot.. 2M

(d) Repeat all (a-c), three more times.....24M

II

Music B

Face audience. Partners release hold. Stand side by side, girl at right, inside hands joined. Free hand of girl holds skirt, that of boy is placed on waist.

(a) Starting with outside foot, take two heel and toe polka steps forward 4M

(b) One polka step outward away from partner (1M) and one polka step inward (1M).... 2M

(c) Drop inside hands. Starting with outside foot, take two polka steps to turn about outward in place. Finish facing in opposite direction 2M

Join inside hands, free hands as above.

(d) Repeat (a-c), starting with inside foot. Reverse direction in (b) and (c) 8M

(e)) Repeat all (a-d) 16M

III

Music A

Partners hold in closed ballroom dance position, extended arms toward audience.

(a) Starting with L (R) foot, take four polka steps clockwise as in figure I (a) 4M

(b) Take three gallop steps sideward left (right) toward front (3 cts.), pause one count. Do not put weight on the closing foot on the third gallop step 2M

(c) Repeat (b), starting with the other foot, going in opposite direction 2M

(d) Repeat all (a-c), three more times 24M

IV

Music C

Partners join inside hands as in figure II. Both start with R foot.

(a) Partners take one polka step sideward R and one polka step sideward L 2M

(b) Point R in front (cts. 1, and), raise same foot across L foot in front, just above the ankle (cts. 2, and). Point R foot in front (cts. 2 and) 2M

(c) Repeat (a) and (b), starting with L foot.. 4M
Drop inside hands. Face each other and place both hands on own waist.
(d) With R elbows near each other, take eight polka steps forward, turning clockwise twice (four polka steps for each turn). Finish in proper places 8M
(e) Repeat all (a-d) 16M

Music Finale

Partners face audience. Join inside hands, free hands as in figure II.
(a) Starting with R foot, take four polka steps forward 4M
(b) Girl whirls counterclockwise under arch of arms as many times as possible 3M
(c) Drop inside hands. Face and bow to each other or to audience; girl holds skirt and boy places hands on waist 1M

GAYANG - GAYANG

(Visayan)

Record — Mico (Philippine) *Gayang-Gayang* No. MBU 991-57.

This dance is popular in Aklan Capig. Gayang is a pet name for Leodegario.

Formation: Partners stand side by side, girl at right side, both facing audience. One to any number of pairs may take part in this dance. If many are participating, couples stand in column formation.

Introduction

Music Introduction

Partners join inside hands, free hand of girl holding skirt, hand of boy is on his waist.
(a) Starting with R foot, take three steps forward (cts. 1, 2, 3) 2M
(b) Bow to audience 2M

I

Music A

Partners face audience, inside hands joined, free hands as above.
(a) Leap onto R, cross in front of L, at the same time raising L foot in rear of R knee (ct. 1), step L in rear of R foot (ct. 2), step R in place (ct. 3) 1M
(b) Repeat (a) seven times more, L and R alternately 7M
Drop hands and face each other.
(c) Repeat (a) and (b). Girl holds skirt, boy places hands on waist 8M

II

Music B

Partners face each other and join both hands.
(a) Execute eight Kuradang steps, R and L alternately. When doing the change step forward, arms are stretched sideward, and when doing it backward, arms are stretched forward 16M
Finish away from each other, about four feet apart.

III

Music C

Partners face each other. They do their movements simultaneously.

Girl

(a) Leap sideward onto R, at the same time raise L in rear of R knee (ct. 1), step L close to R heel (ct. 2), step R in place (ct. 3), bring R hand to fifth position and L hand placed on waist 1M
(b) Repeat (a) starting with L foot. Reverse arm position 1M
(c) Quarter turn R and repeat (a) and (b).... 2M
(d) Repeat (c) two more times 4M
(e) Clap hands as boy in (a) below 8M

Boy

(a) In the meantime, clap hands and stamp with R foot on cts. 1, 3 of every measure..... 8M
(b) Repeat girl's movement above (a-d)..... 8M

IV

Music D

Partners hold in closed ballroom dance position (facing each other), extended arms toward audience.
(a) Girl. Stamp R foot forward (ct. 1), stamp with same foot backward (ct. 2). Starting with R foot, take 3 steps forward to turn half way around counterclockwise to partner's place (cts. 1 and 2) 2M
Boy. Stamp L foot backward (ct. 1), stamp with same foot forward (ct. 2). Starting with L foot, take 3 steps backward, to turn half around counterclockwise to partner's place (cts. 1 and 2) 2M
(b) Boy and girl—Repeat (a) with other foot. Reverse the turn (clockwise) to go back to proper places 2M
(c) Repeat (a) and (b) three more times.....12M

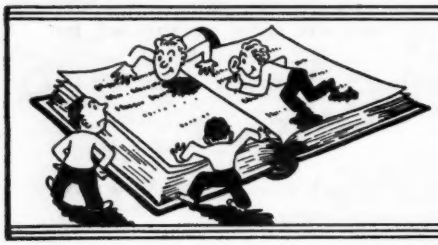
(Continued next issue)

Most women are eternally trying to take off weight, put it on—or rearrange it.

—The Pipe Line.

Marriage is like a railway sign. You see a lovely girl and stop; then you look; and after you are married, you listen.

Banking.



BOOK Reviews

Edited by K. W. Bookwalter

ANDERSON, LUTHER A., *How to Hunt Deer and Small Game*, New York: The Ronald Press Company, 1959, 140 pp., $3.50.

This book is well illustrated and well organized. Instructions are given to the hunter on ways to hunt deer, spuirrel, rabbit, woodcock, pheasant, quail, sharptail, and prairie chickens. There are full descriptions of each type of game, its habitat and range, covert, feeding habits, and other individual characteristics. There are tips on developing the art of wingshooting and snapshooting. Information is given on the training and use of hunting dogs.

Basic fundamentals of hunting are given as well as information on the selection of proper firearms and proper ammunition.

KARL W. BOOKWALTER.

BORST, EVELYNE, and MITCHELL, ELMER D., *Social Games for Recreation*, New York: The Ronald Press Company, 1959, 348 pp., $5.50.

This revised edition has a different format than the previous edition. The book is divided into three parts: Indoor Social Games, Parties, and Outdoor Social Games.

The first chapter, "Swinging into Action", includes ideas concerning essentials of leadership, psychological effects of game formations, techniques for maneuvering groups, and rewards for losers. The remaining chapters of Part I present various types of indoor games. Part II is devoted to arranging and conducting parties, and Part III contains outdoor social games.

This publication is an excellent sourcebook for social recreation and includes the essential techniques for starting, guiding, and stopping social recreation activities.

WILLIAM B. BRADLEY.

GALANTER, EUGENE, *Automatic Teaching: The State of the Art*, New York: John Wiley and Sons, 1959, 198 pp., $3.25

In this book, one will find the major issues involved in the use of teaching machines, the principles of programming materials for machine use, the methods of pragramming, and the results of some research dealing with teaching machines. Any one planning to use teaching machines or programmed textbooks should read this book. Twenty authors have contributed to the book content and one may obtain an excellent review of the status of automation in teaching.

KARL W. BOOKWALTER.

MURRAY, RUTH AND HUSSEY, DELIA P., *From Student to Teacher in Physical Education*, Englewood Cliffs, N. J., Prentice-Hall, Inc., 1959, 110 pp., $2.75.

This book is a completely revised form of a guidebook originally called *And So To Teach*. Some material for use in secondary schools has been included. The authors have attempted to provide the student teachers with information which could make their first induction into teaching a smoother and less fearful process.

The new teacher is given information on personal and professional equipment needed for teaching, understanding people and the community, care of school facilities, responsibilities, planning, organization of groups for different activities, teaching skills and mechanics of teaching, evaluation, regulations and records, the closing cues.

Illustrations provide clarity, humor, and interest.

KARL W. BOOKWALTER.

NIXON, EUGENE W. COZENS, FREDERICK W., *An Introduction to Physcial Education*, Revised by Nixon, John E. and Frederickson, Florence S., Philadelphia: W. B. Saunders Company, 1959, 287 pp., $4.25.

The fifth edition of this book has been revised and reorganized, but it is written to fulfill the primary purposes of the original book: to provide a general overview of the meaning and interpretation of physical education, and to consider the problems of prepar-

ation, interpretation, and opportunity in the field of physical education.

Most of the chapters have been changed, reorganized, or revised; but the references are the latest findings from a variety of fields and are directly related to physical education. The chapter titled "Technique in Teaching Skills in Physical Education Activities" has been eliminated from this edition, and a new chapter "Physical Fitness" has been added.

This up-to-date publication should prove of benefit to teachers, administrators, students, and others who are interested in the meaning and value of the present-day program of physical education.

WILLIAM B. BRADLEY.

O'KEEFE, PATTRIC RUTH AND ALDRICH, ANITA, *Education Through Physical Activities,* Third Edition, St. Louis: C. V. Mosby Company, 1959, 377 pp., $4.50.

The third edition is a revision of the former editions. Sections on fitness, organization of physical education and safety education and schedules have been added to Part 1.

The materials formerly in Part 2 have been regrouped and arranged into two parts. Part 2 deals with activities for grades one, two, and three and Part 3 deals with activities for grades four, five, and six, seven and eight. Part 4 deals with "Special Events" and Part 5 with "Sample Tests." There have been a few activities added. The present organization seems logical and quite usable. Additional illustrations and diagrams improve the book.

KARL W. BOOKWALTER.

PERROTT, J. W., *Anatomy for Students and Teachers of Physical Education,* London: Edward Arnold, Publishers, 1959, 260 pp., $7.00.

The author has filled the need for a study of anatomy from the physical education point of view which stimulates clear analytical thought based upon anatomical facts. Much emphasis has been placed upon the part played by the "limit girdles" rather than by individual bones and the part played by muscles according to joints rather than upon separate muscles lying in a particular position.

The chapters deal with the role of anatomy in physical education, the structure of the tissues, bones of the body, the joints, the muscles, work and movement, posture, the heart and circulation, and the role of competitive sports in physical education. Physical educators will find a chart, "An Analysis of Athletic Games and Sports" of particular interest as the author lists the type of game or sport, the prime movers employed, mental concentration required, efforts upon the heart rate and respiration, age and sex best suited, and the educational values. The book is well illustrated.

KARL W. BOOKWALTER.

POHNDORF, RICHARD H., *Camp Waterfront Programs and Management,* New York, Association Press, 1960, pp. 266, $7.50.

Recent years have shown a tremendous popularity rise in all aquatic sports: fishing, boating, water skiing, and skin and scuba diving leading the list. With this rise in aquatic sports participation, the National Safety Council also lists a rise in aquatic accidents. Dr. Pohndorf, in his book, tends to cope with this situation by giving camps, aquatic schools, universities and colleges, meaningful and worthwhile standards to use and teach by.

Camp Waterfront Programs and Management can be used as a professional text for training aquatic leaders or as a reference book in teacher training courses in aquatics, camping or recreation. No camp director should be without a copy.

The author and associates have combined over seventy-five years of aquatic experiences in organized camping in the preparation of this book. It includes standards for camp organization and administration, waterfront layout, health, safety, watercraft and programing. There is an excellent chapter on seamanship that could be used by the Sea Scouts, Boy Scouts, Sportsmen's Clubs or Outboard Boating Clubs. It also includes chapters on sailing, water skiing and building and developing artificial lakes. Terminology on all phases of aquatics is the keynote of this book and the current bibliography is worth the cost alone.

All this material makes this book a very practical and unusual resource for our field. It is highly recommended for anyone in any phase of camping, recreation or aquatics.

THOMAS F. KRIZAN.

SHEPARD, NATALIE MARIE, *Foundations and Principles of Physical Educaton,* New York: The Ronald Press, 1959, 352 pp., $5.00.

The book is designed to cite the foundations and principles of physical education in terms of the unity of educational purposes The concept of organismic unity is emphasized .

The objective of the book is to note the effect of changing cultural patterns on the growth of physical education throughout the years and to cite the importance of the principles formulated and used as bases for the development and interpretation of the physical education students, school administrators, and teachers on the job.

KARL W. BOOKWALTER.

Recent ARTICLES

Edited by K. W. Bookwalter

COHEN, ABRAM, "Dental Examinations Show Benefits of Water Fluoridation," *Journal of School Health* 30, 1:26, 26, January, 1960.

After a four-year program of fluoridation of the water supply in Philadelphia, a study reveals a range of 19 and 50 per cent reduction in tooth decay for various age groups. There was a 26 per cent decrease in cavities in the primary teeth and a 50 per cent decrease in cavities of the permanent teeth of six-year-old children. Tests have shown that fluoridation is most effective during the prenatal period. Children who were four to seven years old benefited less from fluoridation of water than did younger children.

KARL W. BOOKWALTER.

FRICKE, IRMA B., Chairman, "Recommended Policies and Practices for School Nursing," *Journal of School Health* 29, 10:388-396, December, 1959.

The 1955 edition of the recommended policies and practices *Guide* was revised. The policies deal with the following practices: general responsibilities, selection of the nurse, pupil load of nurse, nursing service, and supervision. School administrators should have access to the revides *Guide*.

KARL W. BOOKWALTER.

GILCHRIST, ROBERT S., "Promising Practices in Education," *Phi Delta Kappan* 61, 5:208-211, February, 1960.

In science and mathematics, youngsters are allowed to discover principles for themselves. Individual science laboratory work is given to some pupils in the eleventh and twelfth grades. The oral-aural approach to teaching of language is being accepted as sound. Language at the elementary level is bound to come. Curricula will be evaluated in terms of academic growth and the contributions that curricula and extra-curricula programs make in terms of pupil accomplishment.

KARL W. BOOKWALTER.

"Lighted Neighborhoods Cut Crime," *Street and Highway Lighting*, 9, 4:2, December, 1959.

A report from New York City indicates that after-dark major crimes were cut 49 per cent in five test areas after the installation of modern street lights. The study covered a two-year period ending in April, 1959, and extended over a 111-block area including portions of Manhattan, Bronx, Brooklyn and Queens.

Top metropolitan police officials in Washington, D. C., reported crime and traffic accidents had been "substantially reduced" in areas where new mercury vapor street lighting had been installed.

Kettering, Ohio, and Asheboro, N. C., are examples of communities in which contractors have installed extra lighting fixtures, and residents report their neighborhoods are safer for pedestrians, motorists, and—perhaps most important—playing children.

Brookings, S. D., (population 8000) ranks as one of the twelve best lighted towns in America and its Police Chief J. J. Connelly says that the new lighting system is a powerful deterrent to crime.

This bright picture is not the usual story, however. It is reported that "only two per cent of America's residential streets are lighted well enough to provide any degree of protection against crimes and accidents, based on practices set down by the Illuminating Engineering Society."

C. WESLEY DANE.

LODGE, HARRY M., "Challenge of the Sixties," *Safety Education*, 39, 5:2-6, January, 1960.

An understanding and appreciation of the child's make-up will provide the adult with tolerance until, through the process of guidance, knowledge, and experience, the child becomes educated and develops the power of self-control. Children are taught most effectively by personal association rather than by remote control.

A challenge of the 60's is for the teacher to accept the broad concept of education. "Training cannot be substituted for education. . . . Education leads the child to think and evaluate for himself. Therefore, education in safe living gives a better preparation to meet hazards."

Only through the cooperative efforts of the school, the home, and the community-at-large can complete success be achieved. A comprehensive program would

include: 1. a community and school survey conducted by safety personnel, 2. set up a plan based on an evaluation of needs. 3. put the plans into effect, making revisions when necessary. 4. test efficiency by evaluating results. 5. tabulate evidence of improvement, and 6. employ systematic research methods and test for reduction of accidents.

C. WESLEY DANE.

MEYERSON, ERMA T., "Tomorrow's Children — Camping's Golden Challenge—Part III, What Will Thev Be Like?" *Camping* 32, 1:11-12, January, 1960.

Education will be geared to providing more knowledge to students in a shorter period of time. There will be diminished emphasis upon the needs of the so-called average child. Present conformity and compliance to social groups may bring about greater efficiency, but there is apt to be an equivalent loss in the spontaneity and creativity of the individual. While there will be a need in the future for team and group activity, there will also be a need for individually oriented activities.

KARL W. BOOKWALTER.

"The Myth of the Speeding Ambulance: Joint Medical-Safety Group Condemns Speed—Calls Care at Scene of Accident Key to Patient Survival," *traffic Safety* 56, 1:8, 9, 43, January, 1960.

"The speeding ambulance, screaming and weaving through traffic with an accident victim, has been condemned by a joint medical-safety committee, composed of the American College of Trauma and the National Safety Council, after a survey of 865 cities on their emergency care for the injured. Surgeons on the committee emphasized that injuries are frequently made worse by fast driving and that the best patient care is a smooth ride."

"Twenty-five per cent of those permanently disabled in traffic accidents would not be crippled with proper care and transportation after the accident. That means 25,000 to 30,000 persons a year would escape the crutch or the wheel chair."

Among the recommendations that each city and state adopt a program of emergency care and transportation of the injured which will correct the inadequacies reported in the study, it is suggested that "Ambulances should adhere to all rules and regulations concerning traffic control. In no circumstances should violation of traffic regulations be permitted. When transporting patients, dual-purpose patrol cars and patrol cars should conform to these same regulations."

C. WESLEY DANE.

RASH, J. KEOGH, "Bridging the Gap Between School Health and Public Health," *Journal of School Health* 30, 1:10-13, January, 1960.

The history of health education reveals numerous instances of misunderstandings and lacks of agreement between school health and public health educators and their programs.

It is proposed that the means for bridging the gap between the groups may be found in councils, committees, and key individuals in the community. Three levels of community action are proposed through the formation of: (1) the school health committee, (2) the school health council, and (3) the community health council. In addition, there will be needed a health coordinator and an interchange between health personnel.

KARL W. BOOKWALTER.

"Student Accidents by Location and Type," *Accident Facts*, 1959, pp. 92-95.

An "accident is that occurrence in a sequence of events which usually produce unintended injury, death, or property damage." Reported accidents are those requiring a doctor's attention or causing absence from school of one-half day or more.

The location of student accidents to school age children and the relative frequency are reported as follows: School plant—62 per cent, home—14 per cent, going to and from school—6 per cent, other—18 per cent.

Of the accidents occurring in the school plant, or on the school grounds, physical education activities contribute as follows: Apparatus (playground)—5.6 per cent, baseball and softball—5.2 per cent, basketball—6.7 per cent, circle games—.8 per cent, football—8.7 per cent, hockey—.2 per cent, soccer and soccer type games—1.9 per cent, swimming—1.0 per cent, track and field events—2.4 per cent, volleyball and similar games—2.5 per cent, other organized games—8.9 per cent, unorganized activities—9.5 per cent. Accidents involved in physical education activities total 43.4 per cent of school plant accidents while other school plant activities total 46.6 per cent of the school plant accidents. (Note: What is the implication for the physical educator?)

C. WESLEY DANE.

The Four-Way Test

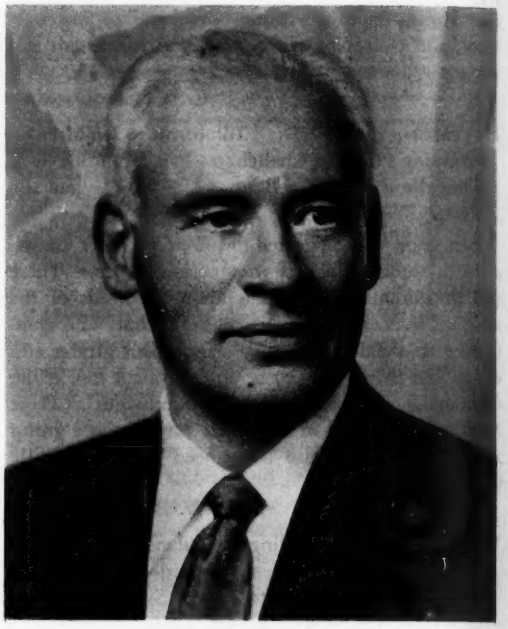
TAKING OVER a defunct business, Herbert J. Taylor, a manufacturer of Park Ridge, Illinois, built a two-million-dollar enterprise on the following four-way test:

Is it the truth?
Is it fair to all concerned?
Will it build good will and better friendships?
Will it be beneficial to all concerned?

—From *Wheel Horse*, Rotary Club, Lexington, Ky.

Noteworthy People in the Profession

Edited by K. W. Bookwalter



HYMAN KRAKOWER

DR. KRAKOWER was born in Brooklyn, New York, in 1907. He received a diploma from Panzer College in 1928; the B. S. Degree in 1930, the M. A. Degree in 1931, and the Ph.D. Degree in 1934 from New York University. He has been associated with the City College of New York since 1930, and is Professor and Chairman of the Department of Physical and Health Education. The department includes both men and women in the required program of health and physical education, teacher-education, intercollegiate athletics, intramurals, and medical health service. He has been a "visiting" staff member at Panzer College; at the College of Medicine and the School of Education of New York University; and the School of Education of the University of Texas.

He has served on many local, state, district and national committees. He received the Alumni Distinguished Service Award from Panzer College. He is an Honor Award Fellow of the American Association for Health, Physical Education, and Recreation.

Dr. Krakower is author of over 75 professional articles. For a number of years he served as columnist for *Scholastic Coach*, and as an associate editor of the *Journal* and the *Research Quarterly* of the American Association for Health, Physical Education, and Recreation. He is author of *Tests and Measurements Applied to Nursing Education*, co-author of *Research Methods Applied to Health, Physical Education, and Recreation*, and co-author of *Health Values: A Text and Workbook*.

MARJORIE PHILLIPS

MARJORIE PHILLIPS was born at Salem, Massachusetts, in 1909. She received her diploma from Sargent School of Physical Education in 1930, the B. S. Degree in education from Boston University in 1931, the M. S. Degree from Wellesley College in 1935, and the Ph.D. Degree from the University of Wisconsin in 1945.

Her teaching experience includes public schools, Cushing Academy, Lawrence College, and Indiana University. She is presently Professor of Physical Education, in the School of Health, Physical Education, and Recreation, at Indiana University.

She has served as president of and as chairman of many committees of the Research Council, AAHPER; as chairman of the Research Sections of the Midwest District, AAHPER, and of the AAHPER; chairman of the Measurement and Evaluation Section, AAHPER; and as chairman of the Badminton Committee, and Research Committee, D.G.W.S., AAHPER, as well as many committees on the local, state, and national level.

She is a member of Pi Lambda Theta, a Fellow of the American Academy of Physical Education, and an Honor Fellow of the American Association for Health, Physical Education, and Recreation. She was a delegate to President Eisenhower's Fitness Conference, Annapolis, in June, 1956.

She has contributed to the professional literature through fifteen articles published in the *Research Quarterly, Journal of Health and Physical Education, The Physical Educator,* and *Tennis and Badminton Guide.* She is co-author of *Research Methods Applied to Health, Physical Education, and Recreation* and the subsequent revised edition; *Measurement and Evaluation Materials in Health, Physical Education, and Recreation;* and *Administration of Tests in Physical Education.*

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